

VOLUME 17
NUMBER 3

AMAZING STORIES

MARCH
1943

VICTORY FROM THE VOID *by* Wm. P. McGIVERN
D. W. O'BRIEN

See
BACK
COVER

75¢

AMAZING STORIES

MARCH
25c

The METAL MONSTER

By E. K.
JARVIS





**When a COLD
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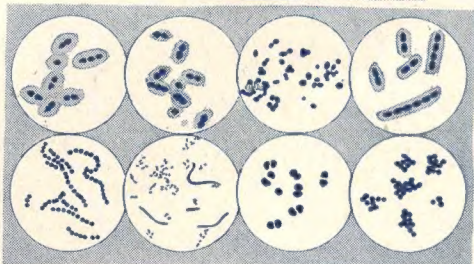
The more of these germs Listerine Antiseptic destroys, the less chance there is of a "mass invasion" of the tissue, followed by the discomfort of a cold and sore throat.

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TOP ROW, left to right: Pneumococcus Type III, Pneumococcus Type IV, Streptococcus Viridans, Friedlander's Bacillus. BOTTOM ROW, left to right: Streptococcus Hemolyticus, Bacillus Influenzae, Micrococcus Catarrhalis, Staphylococcus Aureus.

The "Secondary Invaders"

Above are some types of "secondary invaders", millions of which may exist on the mouth and throat surfaces. They may cause no harm until body resistance is lowered when they may invade the tissue and set up or aggravate the troublesome aspects of the infection you call a cold. You can see how important it is to attack them before they get the upper hand.

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I Trained These Men at Home I Will Train You Too



AMAZING STORIES

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Front cover painting by Robert Fuqua illustrating a scene from "The Metal Monster"

Back cover painting by James B. Settles depicting the "Submarine of Neptune"

Illustrations by Frank R. Paul; Virgil Finlay; William Panak; Robert Fuqua; Jay Jackson; L. Raymond Jones; Joe Sewell

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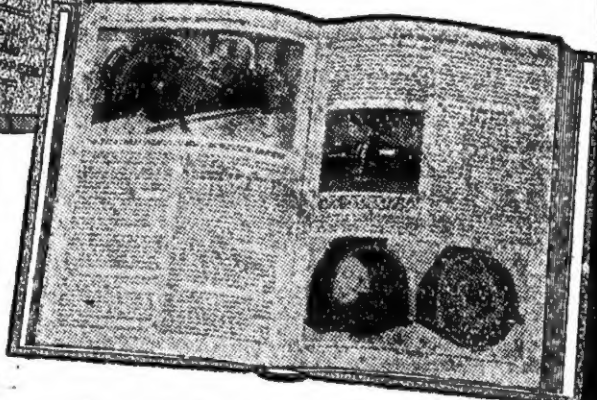
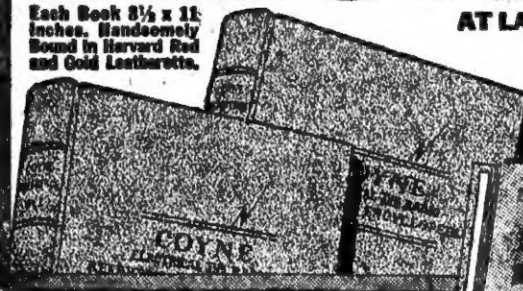
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The OBSERVATORY

by THE Editor

THE Ides of March are upon us, but it's the Issue of April you want to watch for!

On the opposite page you'll get some idea of what we mean. April will be a special issue, combining several things: our seventeenth birthday, and an issue dedicated to the war and the winning of that war. And featured will be the greatest of all interplanetary war stories, Nelson S. Bond's classic-to-be, "That Worlds May Live." So, don't say we didn't warn you! Put aside a quarter for a heck of a lot more entertainment and pleasure any quarter ever bought you before!

SWINGING back to March, this issue has another of those super Fuqua covers. It's been a long time since we had a gadget cover, and your pleas have long gone unheeded. However, now they are answered, and by a gadget that you'll admit was worth waiting for.

E. K. JARVIS did the story, and it's called "The Metal Monster." We sent Jarvis a "stat" of the cover and he certainly went all out on the story! We're sure you'll like it, and that you'll catch his infectious enthusiasm.

CONCLUDING in this issue is Stanley G. Weinbaum's great novel, "The New Adam." We're much interested in knowing what you thought of this book-length story, and suggestions for future stunts of this kind.

SOME months ago we visited a group of youngsters here in Chicago, members of the American Boys Commonwealth, under the guidance of Max Siegel and Jack Friedman who are doing great work in giving these boys a chance to do the things they want to do, and showing them how to do it the right way. We (your editor, David Wright O'Brien, William P. McGivern, and Howard Browne) spoke to these youngsters in an unusual forum, in which the boys aided in the verbal plotting of a story intended for the pages of **AMAZING STORIES**. That story, plotted by boys, but worthy of all of our readers, is in this issue! It's "Victory From The Void" and if you don't

agree that these boys know their onions when it comes to science fiction, you don't know *your* onions! Incidentally, each of these boys will receive a copy of the magazine, and the story he helped to plot.

ONE of your old favorites returns in this issue with a John Hale story. He's Ed Earl Repp, giving us "The Light That Kills." Incidentally, Frank R. Paul illustrates this one, which makes two illustrations for him in this issue. He also did the cover story.

YOUR editor gets a lot of strange manuscripts in his mail; stories written by would-be writers, by cranks, by just plain screwballs, and by people with a "mission" in life. He sometimes tears his hair and wishes he could have some means of exterminating these people. However, the other day a youngster sent us a manuscript which we think is the finest bit of satirical science fiction ever to fall into our hands. It is a perfect example of what other writers tried unsuccessfully to do. We think you will find it full of natural humor, of delightful and startling little surprises, and with an amazing revelation of the inner workings of the mind of the American Boy raised in the land of real freedom; giving an example of that boy expressing himself as Democracy allows him to. Personally, we thank Paul Miles for one of the most fascinating ten minutes of our life, and we present his story "Bill Calderon Goes To The Future" as well worthy of a place in our pages. And we know *you'll* enjoy it too!

CLEE GARSON, another of our newest scintillating stars, presents the other end of the picture. The humor in his story doesn't have the spontaneity of that presented by Paul Miles, but it does have the clever deliberateness that denotes polished ability. "The Money Machine" is a story with an O. Henry ending that will tickle you.

AND wonder of wonders, that story you all looked for in a past issue, "Bring Back My Body" has finally found its way into our pages, and we hope the suspense wasn't too much for

you, and that the story itself will be sufficient reward for waiting so long for it.

THIS issue, we introduce another new writer. Lee Francis presents "Shadow Of The Spider," which is a spider story with a new twist; or should we say "web"? Judging from this first effort, Mr. Francis will be back.

AMAZING STORIES now has a full-fledged big sister. *Mammoth Detective*, on sale right now, has now gone monthly, and will appear on the stands each month exactly six days after AMAZING STORIES. So for those of you readers who like fine detective and mystery fiction, we recommend our big sister as the magazine guaranteed to give you the best!

MOST illustrative of the fact that our little world might not be so interesting to a newcomer not knowing the language, dress, and customs of our civilization, is the experiment performed by K. C. Pratt of Ohio State University. He studied about 25 infants in a specially-designed observation laboratory and found that "the newborn child is more frequently asleep than awake."—In fact, babies are sleep 74% of the time during the first two weeks after birth. Which probably means they are bored!

JUST as a teaser, which we sometimes do, we're going to give you a hint of some of the stories in our files, coming to you in future issues. There's Don Wilcox's "The Earth Stealers" and "The Great Brain Panic," both novels; Ross Rocklynne's "Warrior Queen Of Lolarth" and "Intruders From The Stars," both long jobs by one of your favorite writers; Craig Ellis' sequel to "Dr. Varsag's Amazing Experiment," entitled tentatively "The Second Dr. Varsag's Second Experiment"; Festus Pragnell's "Conspirators of Phobos" and "Madcap of Mars" (new Don Hargreaves stories); and a new author, Gilbert Rae Sonbergh, presenting an odd tale, "The Cultural Lag."

THE Smithsonian Institute had a pleasant surprise not so very long ago when they discovered that a black creature about a yard long that had been sent to them as being a fossilized snake was not a fossil and not even a snake. It turned out to be an Amphiuma, which is an amphibian with almost no limbs and related to the

salamanders. They are so rare that often years pass by without a single one being added to any museum's collection.

Although it possesses no scales, the Amphiuma is often mistaken for a snake, since its legs are so degenerate that they are scarcely visible. Its eyes are so very small that it is nearly blind. Its home is usually in muddy water but it must come to the surface regularly to breathe. Its principal food consists of fish eggs and the abundant aquatic larvae. When the female is ready to lay her eggs, she goes ashore and remains coiled about the eggs until they are hatched.

The specimen sent to the Institution was found buried under 15 feet of mud in the Florida Everglades. It is believed that a slide of muck during the dredging work there trapped the Amphiuma and killed it.

WANT to make a name for yourself in the scientific world? Then discover a means of making water chestnuts self-liquidating.

Efforts along these lines are being made by the United States Department of Agriculture at the request of President Roosevelt.

This floating plant pest, native of China, was introduced into some eastern rivers a number of years ago. It blocks navigation channels and has to be cleared away. It is particularly bad in the Potomac estuary. Therefore, it is hoped that some use may be found for it that will repay part of the cost of its removal.

This plant nuisance contains about 98% of water in its fresh state. The dried residue consists of cellulose.

The Chinese people gather the sharp-horned fruits in their native land and extract the meat for food and it is very good. However, a great deal of hand labor is involved in this method, which makes it impractical and costly in this country. The only possible economic solution under American conditions is mass use of the entire plant by mechanized means.

A quantity of water chestnuts have been dried and sent to the Northern Regional Laboratory of the Bureau of Agricultural Chemistry and Engineering at Peoria, Illinois, where cellulose research is now going on.

And with that, we'll close the Observatory for this time.

Rap

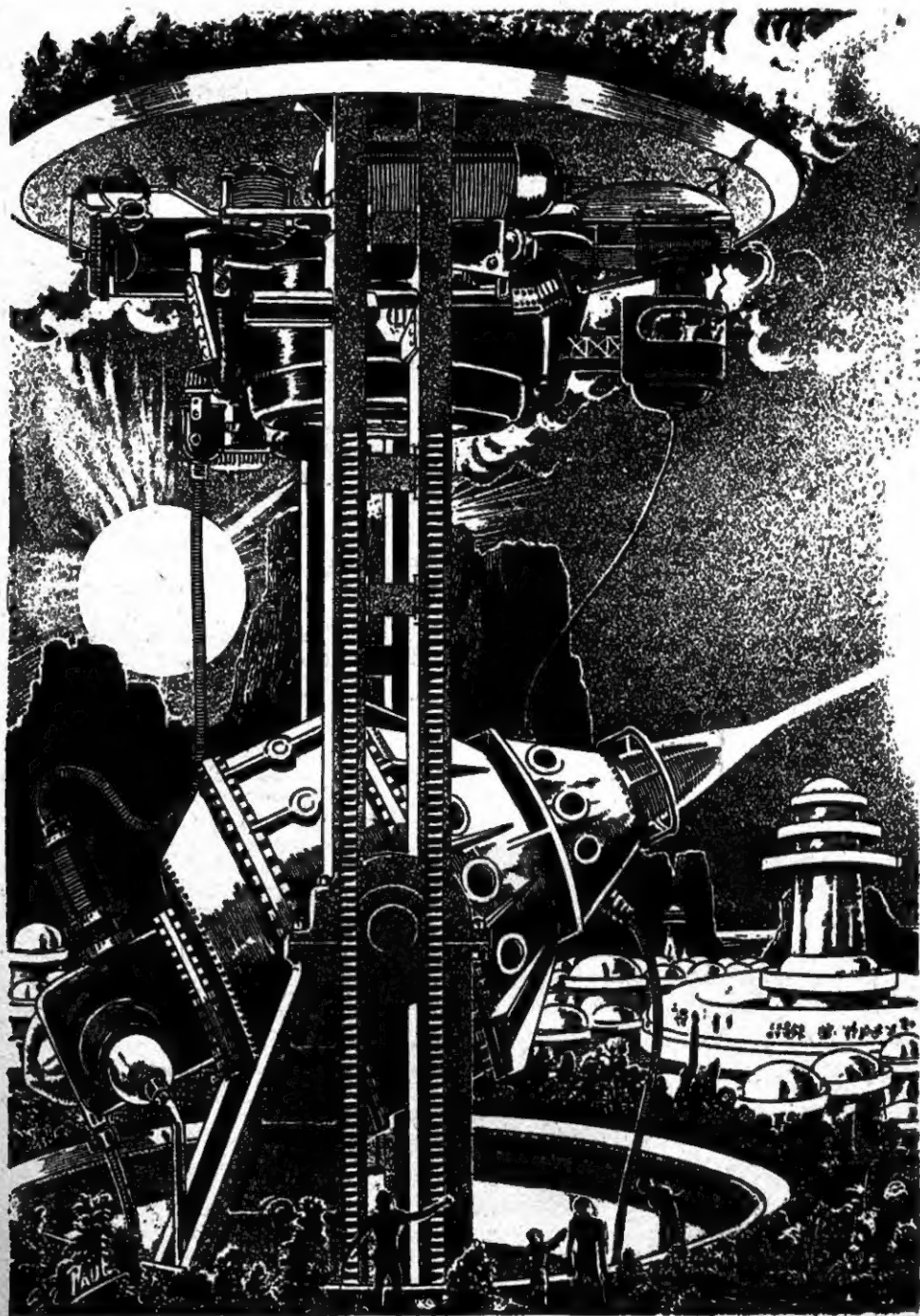
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THE METAL



Powerful rockets lashed out at Earth's cities

MONSTER...

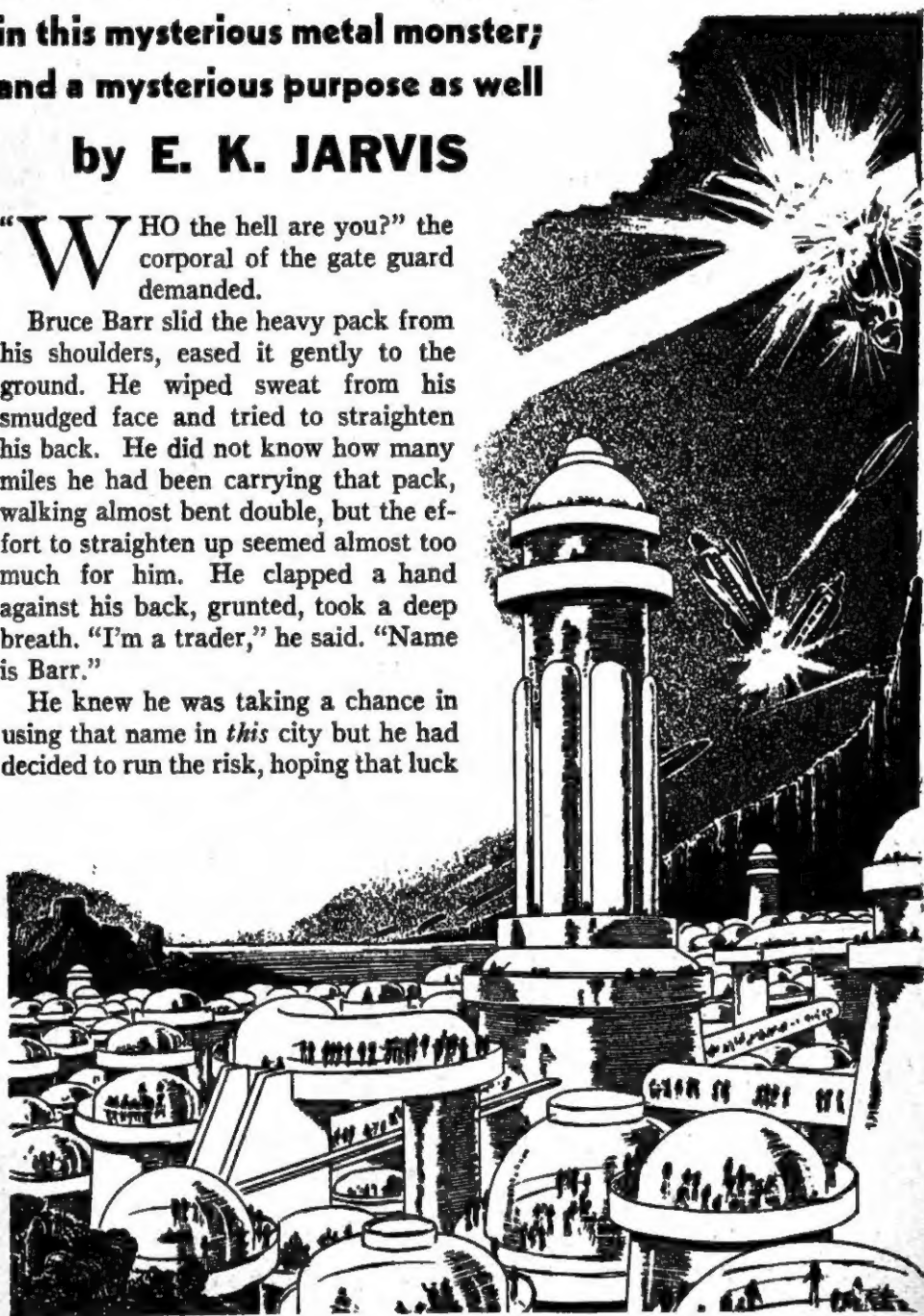
**There was death and destruction
in this mysterious metal monster;
and a mysterious purpose as well**

by E. K. JARVIS

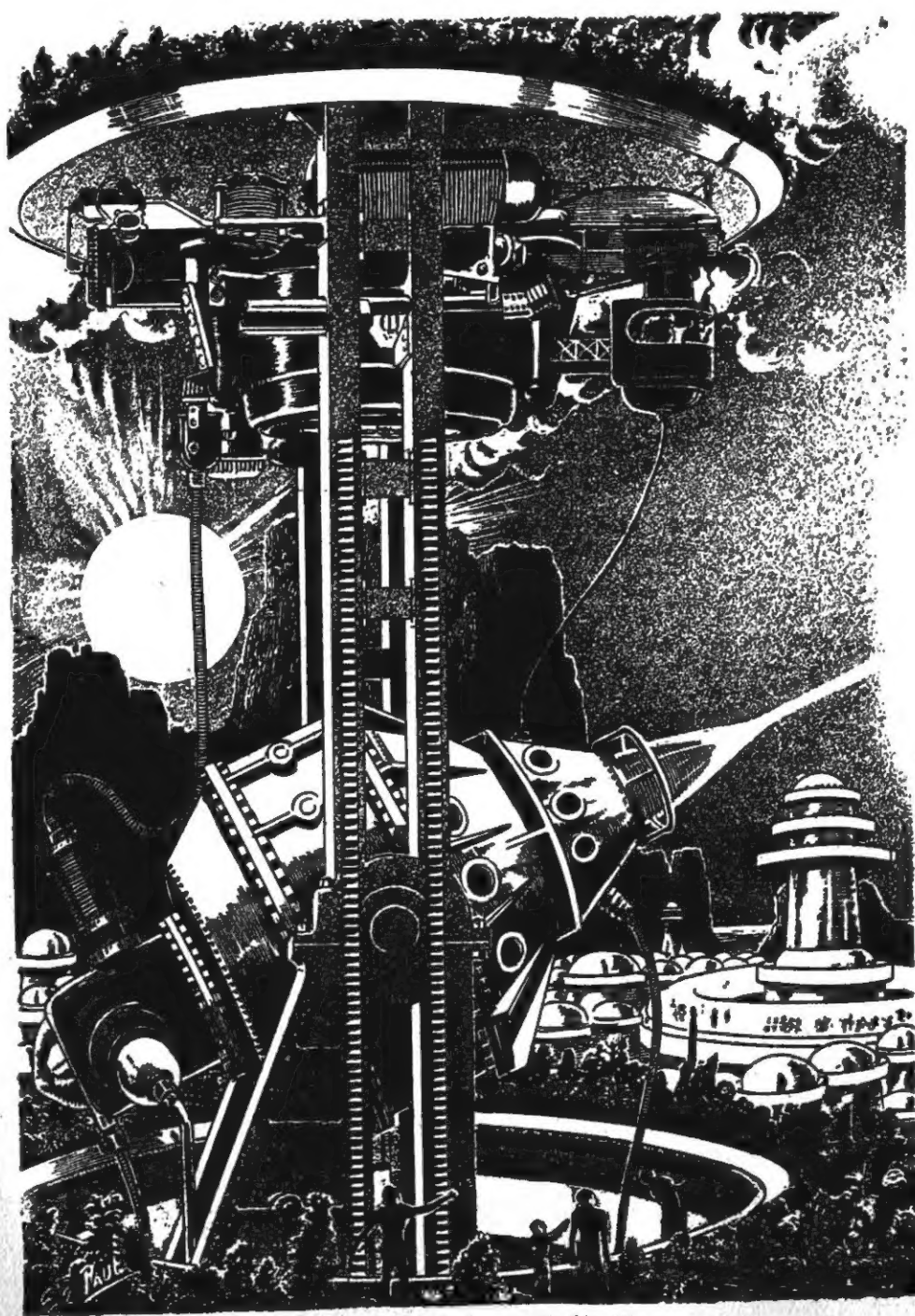
“WHO the hell are you?” the corporal of the gate guard demanded.

Bruce Barr slid the heavy pack from his shoulders, eased it gently to the ground. He wiped sweat from his smudged face and tried to straighten his back. He did not know how many miles he had been carrying that pack, walking almost bent double, but the effort to straighten up seemed almost too much for him. He clapped a hand against his back, grunted, took a deep breath. “I’m a trader,” he said. “Name is Barr.”

He knew he was taking a chance in using that name in *this* city but he had decided to run the risk, hoping that luck



THE METAL



Powerful rockets lashed out at Earth's cities

MONSTER...

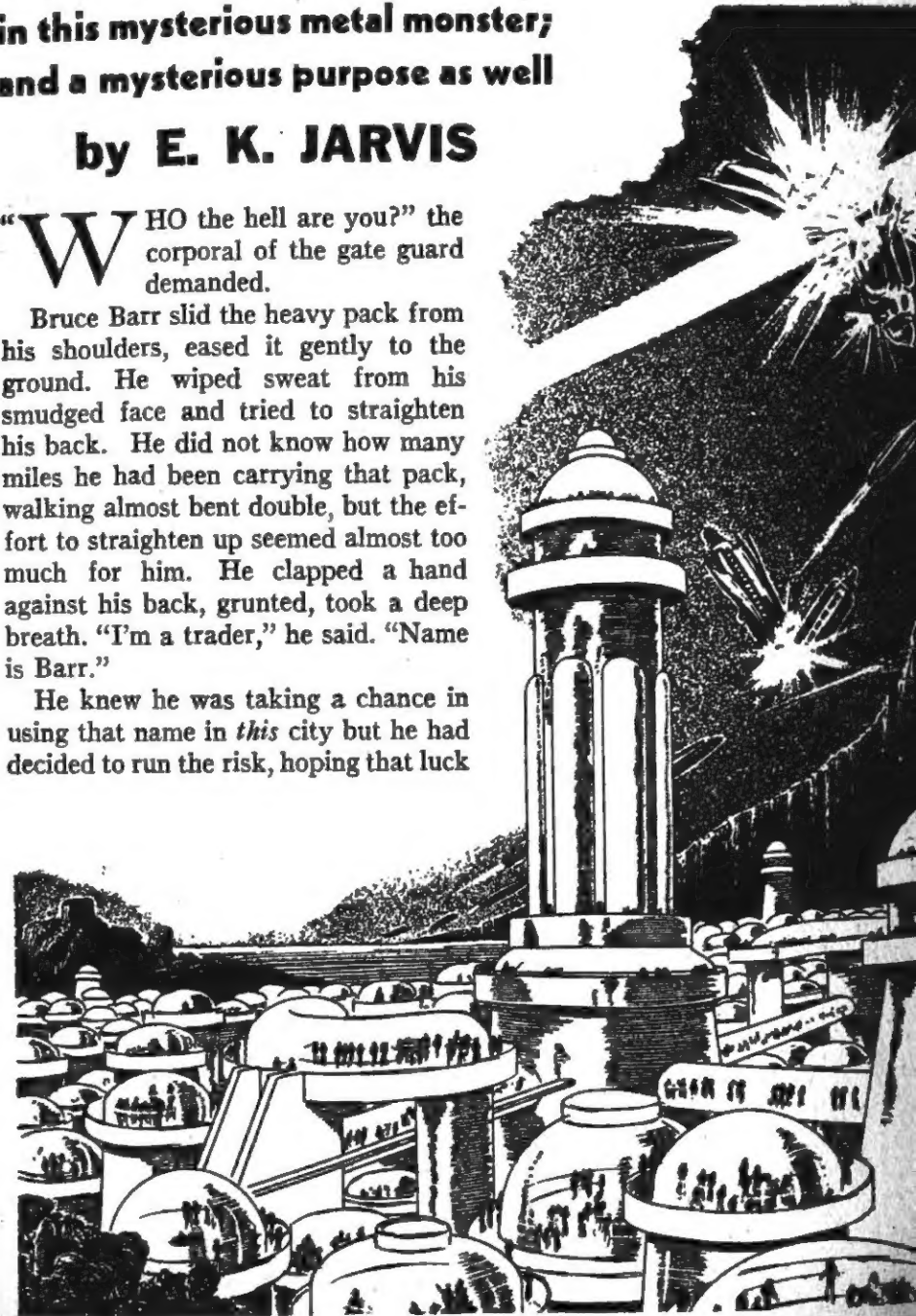
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He knew he was taking a chance in using that name in *this* city but he had decided to run the risk, hoping that luck



might favor the bold. No Joiner would ever suspect that the son of Old Barr would willingly put himself into their power. They would not grow suspicious because of the name. Or he was gambling that they would not. There were many Barrs.

The corporal of the gate guard studied his face. On the wall above him archers were lounging at ease, their bows unstrung. Like the corporal, they were watching him intently.

"A trader, huh?" the corporal said.

"Yes," Barr answered.

"What territory have you been covering?"

"North, around Albany, and down the west bank of the Hudson," Barr said promptly.

"Do you have your trading permit?"

"Certainly," Barr answered. He had *that*. Neither he, nor any other trader, would dare to come into New York without that all-essential permit, not unless he wanted to risk having his neck stretched at the end of a rope. Barr carefully pulled the permit out of an inner pocket, removed the waterproof wrappings, handed it to the corporal.

The guard examined it minutely, glancing up from time to time to make certain that Barr fitted the description.

"It seems to be in order," he said grudgingly, handing it back.

Barr said nothing. The permit had better be in order. Otherwise a lot of time had been wasted in making it a perfect forgery. Not to mention his neck! But, as he carefully wrapped the piece of stiff paper and restored it to his pocket, his face revealed nothing of the tremendous relief he felt inside. He had passed the first hurdle! His permit had been accepted as genuine!

That there would be other, unforeseen hurdles, he did not doubt. Well, he would have to meet them as they came. Getting into New York and get-

ting out again, and remaining alive in the process, was a feat that took some doing; but when he had volunteered for the job, he had accepted the risk.

"Open your pack," the corporal said.

Barr complied. This, too, he had anticipated. He watched the corporal's eager look of anticipation turn into disgust as he examined the contents of the pack. The corporal had obviously hoped that he might find something of value, in which case he, as keeper of the gate, could extract a little private blackmail.

"What is this stuff?" he demanded, fingering a coarse grained, golden flour.

"Corn meal," Barr answered promptly.

"Corn meal?" the corporal echoed blankly.

"Sure. Don't you know what corn meal is? It's flour made out of corn instead of wheat."

"You mean it's food?" the corporal questioned doubtfully. There was new respect in his eyes as he looked at Barr. A trader who brought food to New York would be certain of his welcome.

Barr laughed. "Yes, it's food. And good food too."

"Where did it come from?"

"Up north," Barr said, vaguely waving his hand toward the Hudson. "I found two small mills, run by water-power, still in operation back away from the river. Somehow they had managed to survive destruction. It is possible that a close search will reveal still other mills and if transportation and protection can be arranged, no doubt a small but regular supply of food can be obtained from this area. I brought only a sample with me, to show to the leaders. If they are interested, and if the Presences have no objection, no doubt a small but welcome supply of food may be provided during the coming winter—"

BARR broke off. When he had mentioned the Presences, the corporal had snapped to attention, clicked his heels together, and saluted smartly. On the wall above, the bowmen had gone through the same operation. All around him men were snapping to attention and saluting. Barr was suddenly aware that the corporal of the guard was staring fixedly at him. He snapped to attention.

"Power to the Presence!" he intoned. It was the same phrase the others had used. He repeated it.

"A little slow on the uptake, weren't you, Trader?" the corporal said, hostility in his voice.

"I'm sorry, sir," Barr hastily answered.

"Being sorry doesn't help," the corporal snapped. "What explanation do you have?"

"It is that—" Barr fumbled. "Where I have been—well, recently I have not had to salute—" He stopped, horror-stricken. He had stuck his neck out a mile and unless he could talk fast, he was in a jam.

"Where you have been, the men did not salute?" the corporal echoed. "Trader, what kind of men have you been seeing? Answer me, Trader."

To admit association with men who did not salute when the name of the Presence was mentioned was the shortest cut to sudden death. At a signal from the corporal, the men on the wall hastily strung their bows. These men were Joiners, every one of them. Barr found a dozen arrows pointed at him. He found himself looking at an exceedingly suspicious corporal who would like nothing better than to discover a man who was not a Joiner.

"What I was trying to say," Barr said steadily, "was that I have gotten out of the habit of saluting—"

"You have!" This was heresy, mer-

iting death.

"Will you let me finish?" Barr snapped. "It has been two weeks since I saw another human being. Unless I was in the habit of talking to myself, how could I speak of the Presences?"

This time he snapped promptly to attention, saluted, and intoned, "Power to the Presence." The corporal echoed him. The bowmen on the wall did not. The fact that they were on the alert with drawn bows excused them.

"Does that explanation satisfy you?" Barr demanded. He was acting angry now, as if he were outraged at the thought that anyone could even doubt his loyalty to the Joiners. In reality, he was bluffing. He would have liked to slit the throat of every Joiner in the world but it would not have been diplomatic to say so under the present circumstances.

The corporal hesitated. This man was big and bronzed and he looked competent. He was a trader, which meant he went into the wild outlands. Only a courageous man would do that. Moreover he looked tough. It might not be wise to make an issue of such a minor thing as forgetting, under unusual circumstances, to salute when the Presences were mentioned.

"Well," Barr demanded. "Don't stand there gawking. Remember, I'm bringing food samples to this city. Are you so well supplied that additional food does not interest you?"

The corporal was in a spot and he knew it. The remaining inhabitants of New York for years had been on the verge of starvation. Anyone who could bring food to the city was certain of a welcome. If the corporal had shot a man who was bringing even the promise of food, he would have to answer to his leaders. He hesitated.

Barr saw the hesitation and dared to breathe again. "Make up your mind,"

he said truculently.

"You can enter," the corporal said. Then, his little flouted authority as keeper of this gate, asserting itself, he flared. "You don't have to get so tough about it. Go on in. But first I'll have to inspect your arrowheads."

Barr's only obvious weapons were a short but heavy bow and a quiver of arrows. No Joiner, even if he could have managed to obtain them, was permitted to own a more powerful weapon than a bow and arrow. This regulation was handed down from the Presences themselves; it was designed to prevent the possibility of revolt by keeping effective weapons out of the hands of the people. Barr was familiar with the regulation. But never before had he heard of the guard at the gate inspecting the arrowheads.

"What's the purpose of this inspection?" he demanded.

"Never mind the purpose," the corporal grunted. "Just pour those arrows out of that quiver."

BARR hesitated. He could feel cold sweat popping out all over his body. He was in a desperate spot. He had passed the hurdle of the permit and he had bluffed his way out of the predicament resulting from his failure to salute when mentioning the name of the Presences but he had run straight into another hurdle. His arrowheads would never stand a close inspection. There were twelve arrows in his quiver. Four of them had perfectly normal steel heads. Eight of them had what looked like normal steel heads but which were in reality tiny but extremely powerful atomic bombs, designed to explode when the arrow struck. A casual inspection would not reveal their true nature but if the corporal examined them closely, he would instantly detect that something was wrong with them.

A man with atomic bombs hidden inside his arrow heads would have a short life and an unhappy one. The Presences themselves would be interested in this. They would see it, and see it rightly, as a threat to them. A man with atomic arrowheads would live just exactly long enough to shriek out his whole life history, under torture, and no longer.

"What am I going to do?" the thought flashed through Barr's mind. He might try to run. There was no protection at all outside the wall that closed off the city. Every tree had been cut down, every rock removed. The men on the wall still had their bows strung. Before he could take twenty steps, he would have a dozen arrows through his body. No, he couldn't run. Running was an invitation to death.

"Dump those arrows out," the corporal repeated.

"All right," Barr grumbled, loosening the leather strap that held the quiver on his back. "I still don't see why you want to inspect them."

"Anybody but an idiot would know that," the corporal answered.

"Well, I'm not exactly an idiot and I don't know it," Barr answered. "Would you mind telling me why or is it a state secret?"

"Anybody but a trader who spends all his life in the sticks would know the reason," the corporal said. "Metal."

"Metal?" Barr echoed.

"Certainly," the corporal said sarcastically. "Hadn't you heard that arrow heads are made of metal? And all metal must be turned in. Arrow heads, spear heads, axe heads, knives, everything that is made of metal. Order of the Presences themselves."

The corporal quickly saluted, intoned, "Power to the Presence," and Barr did likewise.

"Another drive for scrap?" Barr said.

"I thought this country had been picked clean of metal long ago."

"Between you and me, I think so too," the corporal said, becoming more friendly. "But it is an order and I have to obey it."

"Naturally," Barr said. "But it leaves us in the devil of a spot. What are we going to use for arrow heads and knives if we have to turn in all metal?"

"I don't know," the corporal shrugged. "Flint maybe."

"Flint arrow heads! Flint knives! The stone age is here all over again!" Barr mused grimly. He did not speak his thoughts aloud. They might be interpreted as criticism of the way the country was being run. The Presences did not tolerate criticism.

"Well, my arrows have steel heads," Barr said, pulling them out of the quiver. "What do you want me to do with them?"

"Just put them over there in that box," the corporal answered, pointing to a wooden receptacle that already contained a collection of similar bits of metal. Barr hesitated, then decided to comply. He hated to give up those arrow heads but he had no choice in the matter. Refusal would gain him nothing. Inwardly he was tremendously relieved that the arrow heads were not going to be subjected to a careful examination. He had been afraid that the gate guards had been tipped off to look for a man with tiny atomic bombs hidden inside the heads of his arrows. If that had been true, it would have meant that news of his coming had preceded him here, that someone on his side was a traitor. It wasn't true, to his great relief. He had merely run into another scrap metal campaign. Apparently the Presences were going over the country with a fine-tooth comb looking for all available metal. Well, let them look for it, Barr thought grimly. They would

have a hell of a time finding it in usable quantities!

Working with extreme care, he removed the heads from the arrows and put the heads in the box. The arrows he thrust back into his quiver, grumbling as he did it. His grumbling was quite in character. A trader would be expected to grumble. He muttered bitterly when he was forced to relinquish a fine hunting knife but he got little sympathy from the corporal.

"Is it all right for me to enter the city?" he asked, slinging his pack on his back.

"Yes," the corporal answered, signing to the gateman.

The ponderous wooden gate swung open. Barr stepped through. His heart leaped as he stepped through the gate. He was in New York. He was inside the city. The first lap of his dangerous journey was successfully completed!

CHAPTER II

Tomorrow in New York

IT WAS the first time Barr had ever seen New York, although, from childhood on, he had heard tales of it. New York was the wonder city of the continent, and probably of the world, the glittering metropolis on the eastern seaboard, the city whose sky-flung towers awed all visitors. Barr had seen a few faded pictures of New York in the days of its glory. After the second world war had ended in 1944 and America had emerged as the dominant nation on earth, New York had been the Queen City of the World. It had been in its glory then. Now—

There was bitterness in Barr's heart as he stared at the scenes around him. He had passed through the gate and was walking down a street that led to the heart of the city. Once this street

had been a magnificent avenue, lined solidly on both sides with apartment houses, wide enough for eight lanes of traffic.

It was wide enough now for a goat to pick its way down the middle. The avenue had shrunk to a footpath.

It had shrunk in size because the apartment houses on both sides had fallen into it, almost closing it with their rubble of brick and stone.

In effect, the apartment houses had jumped into the street. They had jumped into the street because bombs had landed somewhere near. Not big bombs, either, at least not big in size. They had not weighed over ten pounds. Their destructive effect had been out of all proportion to their size.

Barr picked his way down the street. Here and there among the ruins he could see rude shelters constructed of brick and stone. Windowless, with holes serving as doors, they looked like hovels. They *were* hovels. Now and then he saw wan faces peeping out of them. Once he saw a child, a thin, emaciated little girl, with the bulging stomach that is a sure sign of starvation. He averted his face.

Although he had seen other cities like this the sight still turned a knife in his heart. Chicago he had seen, and St Louis, and Pittsburgh. Michigan Avenue in Chicago looked even worse than this street. Chicago was a mound of shattered rubble beside peaceful Lake Michigan.

He did not know what London looked like, or Paris. No radio signals ever came from Europe to tell the tale of what had happened there. He wondered if there was an England. The English, that tough, stubborn people, had certainly not surrendered. They had fought. It was in their nature to fight. What had happened to them?

Barr trudged into the city. In places

the street was unobstructed, the buildings on either side still standing though there was not a pane of glass in any window. The buildings were showing plentiful signs of decay. No effort had been made to maintain them. Downspouts, gutters, knobs from the doors, every scrap of metal had been ruthlessly torn out of them in some early salvage hunt. How the Presences must want metal! Well, Barr thought, they'll have a hell of a time getting it, even with all the Joiners in the world to help them!

Here, where the buildings had not been completely destroyed, more people were living. Existing would be the better word for it, since on every face he saw the sure marks of starvation. Here were even a few pitiful little shops, in one he saw the only commodity offered for sale was tow sacks, and from the clothing he occasionally saw around him, he knew what the sacks were being used for! When no cloth was being manufactured, people had to use what they could get for clothing. What little trade there was was strictly by barter. There was no money in existence. Paper money was worthless and gold and silver coins had long since been confiscated.

Barr knew exactly where he was going: Times Square. He did not know how to get there and he had to stop twice and ask directions. Each time the answer to his question was a jerk of the thumb. No one spoke to him but he caught occasional side-long glances as people stared curiously at him. He did not know whether it was his leather clothing that was attracting their attention or the pack on his back. He was dressed entirely in soft leather, even to the moccasins on his feet. He had the hunch that if these people knew there was food in his pack he would be mobbed.

BEFORE he reached Times Square he saw ahead of him in the distance the ruins of what had been one of the sights of New York in the days of the New York's glory—the skyscrapers. Tall buildings climbing up one hundred, two hundred stories in the air. He gasped at the sight of them, marveling at the effort that had gone into building them, into the vision that planned them. Some of the skyscrapers were mounds of rubble but others were standing. Useless now. It was too much of a struggle to climb to the top of those tall towers. He knew that the buildings had once contained elevators, and might contain them still, but he also knew there was no power in the city to run the elevators. Or to run anything else. Except for the malicious life it contained, the city was dead. Dead and done for. Gone, finished, all washed up, the days of its glory ended.

Barr reached Times Square. Once in the long ago he knew thousands of people had thronged here. This had been the heart of the theatrical district and at night the glow of its lights had lit the sky with their brilliance. Unnumbered automobiles had once used these streets, and trains, the subway, had even run underground. The street creeping off through the debris was Broadway, the Great White Way in the days of America's glory. Broadway was no longer a Great White Way and there was no longer glory in America.

Barr found his rendezvous. Once a mighty building had stood here on this street. Now only the corner stone remained. Graved in the stone were the words ANNO DOMINI 2090. He thought, with a touch of nostalgic sadness, that the corner stone had been laid in the year he was born. Twenty-eight years the stone had stood here. Somehow it had managed to survive

the horror that had strode on earth-shaking feet through this city. This corner stone was his place of rendezvous. Here someone—he did not know who—would meet him. He shrugged his pack to the ground, sat down beside the stone, and ran over in his mind the pass-words that would serve not only to identify him but to identify the unknown person who was to meet him here. To the casual passer-by, he was only a tired man who had chosen this spot to ease off his burden and rest for a while.

The passers were few. Mostly women, old women at that, and a few children. Almost no men. He wondered where the men were and decided they must be in labor squads. The Presences required labor from those who joined them, labor in large amounts. In exchange for the labor they offered the one thing that was almost impossible to resist—food.

"Hello, Stranger," a voice said near him.

Barr looked up quickly. He was startled, for two reasons. One, this was the code greeting by which he would know the person who was to meet him. The second reason was simply that he had not heard the person approach.

A slim slip of a girl was facing him. She had gray eyes, he noticed, and hair the color of dull copper. But what he noticed most of all was the fact that she was clad in the yellow uniform of the armed forces of the Joiners. The bars of a lieutenant were on her shoulders.

For a girl to be serving in the armed forces was not unusual. In the bitter struggle that was going on, women served beside the men, often with equal valor. But for a girl or anyone else in the uniform of a Joiner to be asking him the code question that would identify his friends within the city meant—

Barr did not know what it meant. Trouble, most likely. Barr wondered whether he should give the proper answer to her greeting. To do so would serve to identify him. If she was a Joiner, and if the Joiners were aware of his purpose in coming here, it would identify him to his doom. He decided against giving the proper answer.

"Hi, Sis," he said.

The girl's face showed surprise, then anger. "Sir!" she said.

"Does your mother know you're out?" Barr asked. He was watching her closely.

She colored. "Keep a civil tongue in your head," she snapped.

"You started this conversation," he reminded her.

"What if I did? Can't I speak to a stranger without getting snapped at?"

Barr grinned. "No hard feelings, Sis." He eyed her appraisingly. "You're a pleasant-looking wench," he said.

ANGER made her really beautiful.

No girl ever likes to be called a wench. This lieutenant especially did not like it. For a moment Barr thought she was going to explode. "You—you —" she was so mad she stuttered.

Barr could not quite make up his mind about her. She *looked* honest. He had a hunch that he could trust her. It was quite possible that she was wearing the uniform of a Joiner and was a member of the Joiner party but was actually working against them. When living among Joiners it was exceedingly unhealthy not to be one of them. She might be boring from within. He decided to test her. If she was a Joiner and if this was a trap— He looked around. No one else in the uniform of a Joiner was in sight. If this was a trap, he could slug her and run.

"Nice day, isn't it?" he said. This was strictly code.

She was still so angry she could not speak. At his words, she blinked and looked doubtfully at him. Seeing the look of surprise on her face, Barr instantly knew that she had recognized the code. She was no casual passerby who had happened to speak to him, then. She had come to this rendezvous looking for him. He waited for her answer.

"It's a nice day, if you happen to like it," she snapped.

This was the answer she was supposed to make.

"Okay," Barr said. "Where do we go from here?"

"Follow me," the girl answered. She turned and walked away.

Barr slipped his pack on his shoulders and turned to follow her. He still did not completely trust the situation. She might be leading him into a trap. Vehemently he wished he had a weapon of some kind, one of those old-time automatic pistols would be a big help. He hadn't brought a pistol for the reason that to be caught with it would insure his speedy death. Pistols were *verboden*—forbidden.

The girl led him into a cheap bar. There were a few men lounging here. They eyed him incuriously. The girl, with a jerk of her chin, led him through a door at the back. Barr, every sense alert, followed. "If this a trap, I'm in it," he thought.

He could not quite bring himself to believe it was a trap. This girl, despite the fact that she wore the yellow Joiner uniform, somehow looked honest. He followed her down a flight of stairs, along a narrow tunnel. They came to a heavy door. She gave a peculiar knock and the door opened.

There were five men in the room. Three of them wore yellow uniforms. They looked up at Barr and the girl entered.

"Fellows," the girl said, "I've brought you the spy we were expecting."

There was silence in the room. Not a man spoke. The air was heavy and musty. Barr was aware that the men were staring at him. They were making no effort to hide the hostility in their gaze.

"Spy, did you say, Rita?" a bearded, dark-faced hulk of a man drawled.

"That's what I said, Bruton," the girl answered.

"A spy from the so-called Council of Scientists?" the bearded giant continued. He fairly spat out the words.

"That's right," the girl said.

Silence fell again. Five pairs of eyes were focused on Barr. The girl did not look at him. Then Bruton spoke. "Ah," he said.

"Ah, what?" a second man spoke.

"Ah, shall we shoot him, or ah, shall we knife him?" Bruton answered. As he spoke his hand went inside his yellow blouse and brought out a gun, something Barr had not expected to see here in this city.

"I say let's knife him," a third man spoke. "Powder and lead are too hard to get to waste on rats."

A growl of approval met this statement.

"Well, well," Barr said. "So it is a trap!" He looked at the girl but she avoided his gaze. "Good going, Sis," he said harshly. "No doubt your masters will reward you generously for this."

"Shut up!" the man she had called Bruton spoke.

Barr was silent. He was looking quickly around the room, darting glances out of the corners of his eyes, estimating his chances of coming out of this place alive, if any. Five against one, not counting the girl. The five were armed and he was not. The odds

were bad. His only hope was to jerk open the door and run, which was no hope at all. He wasted no time and no mental effort in cursing himself for falling into this trap. The girl had fooled him. Somehow the Joiners had managed to intercept the radio messages that announced his coming and had cracked the code in which the messages were written. They had been waiting for him, with the proper pass words all ready.

"We always give a man a chance to speak for himself," Bruton said. "Even a spy. If you have anything to say, say it." He was holding the gun very steady.

"I've got something to say," Barr said. He forced himself to be calm, forced steadiness into his voice. "Yes, I'm a spy. I was sent here by the Council of Scientists. I have a message for every man and woman in this city. The message is — those beasts that you call the Presences will soon be utterly destroyed and the human race will again take its rightful place as the rulers of earth!"

SPOKEN in New York, these words were heresy and Barr knew it. When he had admitted he was a spy, he had already signed his death warrant and nothing he could say would make his death more certain. He was hoping, by challenging them, to anger these Joiners. Angry men may fight well but they do not fight with their heads. If he could make them mad, they might give him an opening for a break. An opening was all he asked.

Anger showed on their faces when he spoke.

"You're a fool!" Bruton said.

"More than that, you're a dangerous fool," a second man added. "If the words you have just spoken were generally known in this city, there would

be an uprising."

"No doubt," Barr said. "And if you yellow Joiners had not aided the Presences by joining them, we would have licked them in the first place."

He gouged them in a raw spot that time. The Joiners had received their name because they advocated joining the Presences. All of them showed anger, including the girl lieutenant who had lured him here.

"And if you had the guts to fight now, we would still lick them!" Barr continued. "But I guess I can't expect a bunch of yellow rats to stand up and fight—" *Crash!*

Barr scooped a chair from the floor, flung it in a single motion straight at Bruton, who was lunging to his feet. The spy had the satisfaction of seeing Bruton go to the floor when the chair hit him. He was too surprised to use the gun he was holding. Bruton was down but he wasn't out.

"Get him!" he yelled at the top of his lungs.

The other four men leaped straight at him.

Barr took one step backward, grabbed the door handle and jerked with all his might. Throwing the chair had gained him a moment's respite. Before the Joiners could recover from their surprise he would be out the door and gone. This was one trap he had escaped.

The knob turned in his hands. The door would not open. Unnoticed, Rita had locked it when they entered.

"Damn!" Barr said.

He whirled, his fists coming up. He had the confused impression that the space in front of him was full of men, all of them trying to get at him. He struck out, his fist meeting solid flesh. A man grunted. Then they were on him.

Bruce Barr's muscles were all wire

and steel springs. Ever since he had been old enough to walk, he had been rigorously trained. No athlete was ever better conditioned than he was. Experts had made him into a fighting machine. He fought now. Four against one, but he fought anyhow. Then Bruton lunged to his feet and it was five against one. A fist struck him under the jaw. He shrugged off the effect. He hit solidly at one of the faces in front of him. The face jerked backward. Somebody lunged in under his guard, dived at his legs.

If he could have stayed on his feet, he might have had a chance even if the odds were five to one against him. But he couldn't stay on his feet, not when they were jerked out from under him. He went down with a crash, tried to struggle erect, tried to keep on fighting. Something hit him on the head. Stars exploded before his eyes. Darkness closed in around the stars.

Bruce Barr lost consciousness. In the dazed second before the lights went out, he realized the Joiners had him.

CHAPTER III

The Joiner's Test

BARR'S first impression, when he regained consciousness, was that he was drowning. His second impression was a vague, wondering thought as to *why* he was regaining consciousness at all. Joiners usually didn't bother to revive their victims, unless, of course, they wished to extract information from them. He choked, swallowed, opened his eyes, and looked up into the perturbed gray eyes of Rita. She was dribbling water over his face. He sat up and looked into the faces of the five men who had been present in the room. Four of the men looked relieved when he regained consciousness. Bruton, he

thought, looked annoyed.

He felt tenderly of his head. It was still attached to his body. From the way it felt, this was more than he expected.

"Well," he said. "What are you waiting on? Get on with your job and get it over with."

"Are you hurt?" Rita asked anxiously.

He stared bitterly at her. "Oh, no. Being beaten up and knocked out is my idea of an interesting fifteen minutes. Isn't it yours, too?"

She bit her lips. "I'm sorry you were so mistreated, but you haven't been badly hurt. Besides there was no other way of making certain about you."

He stared at her. "What the hell are you talking about?" he demanded.

"This," the girl answered. "We can't afford to take chances. We can't afford to make mistakes. You were waiting at the proper place and you knew the proper identification phrases. But the Joiners might have intercepted our radio messages, and they might have sent a spy to catch us all. So we put you to the test. In order to make certain of you, we pretended we were Joiners and led you to believe you had been betrayed. We did this so we could watch your reaction. If you had been a Joiner spy instead of a man sent by the Council of Scientists, we would have caught you. Our uniforms, the fact that we accused you of being a spy from the Science Council, would have fooled you into betraying yourself—"

Barr stared at her in stupified astonishment. His head was going round and round and nothing that he heard made sense. "What kind of damned foolishness is this?" he grunted. "What are you after now?"

"We're not after anything," the girl insisted. "Believe me when I say we

are your true friends, we are the group you were supposed to contact."

"What—" In spite of himself, his mouth fell open. "That—that business of accusing me—"

"Was a test," the girl said eagerly. "You didn't know it was a test, but you passed it with flying colors. When you defied us, told us to go to hell, and tried to fight your way out of here, you did exactly the right thing. If you had done anything else, you would never have got out of here alive."

"Well, I'll be damned!" was all Barr could say.

His first impression of this girl was that she was honest. Involuntarily his eyes went to the yellow uniform she was wearing.

"Don't worry about this uniform," she said, interpreting his glance. "We belong to the Joiner party and we pretend to be Joiners. That is the only way we can stay alive. But we are really working for the Council, boring from within, fighting the Presences in the only way they can be fought."

Barr looked around the room. The others were nodding emphatic agreement with what the girl had said. He began to grin. "All I can say," he said, "is that if you treat your friends as rough as you have treated me, you must be holy terrors to your enemies."

He got slowly to his feet. Someone brought a chair for him, brought him, of all things, a cigarette. Eagerly they clustered around him, to hear what news he brought.

"What of the Council?" Rita eagerly asked. "How soon will they be able to give us help?"

"Yes," Bruton seconded. "How soon will they be able to give us ships and men? Or are they still doing nothing but stalling? When are we going to get some action out of those fellows?"

BARR looked around the group. He saw the eagerness on their faces, the hope that the fierce struggle might soon be ended. He started to speak, swallowed, changed his mind. He could not bring himself to reveal to these people that the Council was little more than a name, that while it went by the awe-inspiring title of Council of the Scientists and while it was supposed to have a secret, invulnerable stronghold hidden away in the Rocky Mountains of the west, where it was constructing a vast quantity of powerful weapons, in reality it did not number more than five hundred men, and that its supposed stronghold was a crippled, half-equipped laboratory hidden in a cave. True, the men who worked in that laboratory were making a few weapons—they had made the tiny atomic bombs that had been fitted into his arrow heads—but those few weapons were made at the cost of back-breaking toil, and were not sufficient in quantity to equip a single regiment—if a regiment could have been raised. Barr simply did not choose to tell the truth. Men fought better when they had some hope of winning.

“We have ships!” he said firmly. “Rocket fliers.”

“You do!” Rita gasped. “Oh, that is simply wonderful!”

“How do you suppose I got from the Rocky Mountains to New York without a ship?” Barr said.

“Where is your ship now?” Bruton questioned.

“Well hidden, outside the city,” Barr grimly answered.

“How many of them do you have?” the bearded giant continued.

“I don’t know,” Barr answered. “Not as many as we will have six months from now.”

There were exactly three rocket fliers in existence, one-man jobs but exceed-

ingly fast and well-armed. Each one represented months of the hardest imaginable work—no, slavery would be the better term—by the few scientists and technicians who had managed to survive. Three ships to reconquer a world!

“Rocket ships!” Rita said exultantly. “Oh, if we can only use them in time—” Her voice faded. The exultation went out of it, was replaced by a dreary hopelessness.

Barr caught the change of tone. At the same time the others exchanged glances. Their actions sent a chill of warning through him.

“In time for what?” he said.

The girl avoided his eyes. She looked at the others. They shifted uneasily. No one spoke.

“Speak up,” Barr said. “In time for what?”

Rita found her voice. “That’s just it,” she said. “We don’t know what. All we know is that the Presences have some new scheme in mind. They’re working day and night on it. They’ve commandeered all available labor, conscripted men, women, and children, all except the guard they have left in the city, and taken them down the coast. No one that has been taken has ever returned and we have been unable to discover what they are doing. They’ve established a huge armed camp, with a ring of guards around it. No one has been able to get close to the place, not even the Joiners. All we know is that they are building something, but we don’t know what it is.”

She spoke rapidly, like a person telling bad news. Her voice went into silence. There had been hope on her face when he told them of the rocket ships. Now the hope was gone. A dull resignation had replaced it.

“Isn’t there any way to find out what they’re doing?” Barr asked.

"We've tried everything," Bruton spoke. "Harder, here," he nodded to one of the men who was not in uniform, "is a radio expert. He built a radio transmitter no bigger than a watch. One of the conscripts took it with him when he had to report for work. We thought he would be able to send out radio messages."

"He couldn't?" Barr questioned.

"The Presences found his radio before he had a chance to send a message. He got out three words. 'I'm done for.' That was all." The bearded giant shook his head. He did not need to explain what had happened to the man who had been caught with a radio transmitter in his possession.

"You have no idea what they are doing?" Barr questioned.

"None whatsoever," Bruton answered. He looked questioningly at Barr. "There is one way we *might* find out," he said.

"What's that?"

"You take your rocket ship and cruise over the area at night—"

"Not a chance," Barr interrupted.

"Why not?" Bruton challenged. "If you're afraid to go, I'll fly the ship, if you will tell me where it's hidden."

THE tone of his voice was an insult in itself. Barr stiffened, then stifled the angry retort on his lips. "Rocket ships are too precious to risk," he explained. "If I cruise over that area and run into a ray beam, I'll get myself killed. This is not important. The important thing is that the flier would be smashed. Under the circumstances, I don't dare risk losing the ship."

"You risked it when you flew it here," Bruton pointed out.

"I did not," Barr protested. "I flew only at night and I stayed away from populated places." He hesitated. He did not wish to seem uncooperative,

but there were simply too few rocket ships in existence to risk losing one except in the most desperate emergency. He was annoyed at this challenge to his courage, but he kept himself under control. "If we cannot get the information we need in any other way, I'll use the ship. But first we will have to try every other method. Does that suit you?"

It obviously did not suit Bruton. For a moment the giant looked as if he wanted to spring at Barr's throat. The secret agent wondered why the man should be so insistent that they use the ship.

"Barr is right," another voice spoke. The agent looked around. A fellow by the name of Burke had spoken. Clad in the yellow Joiner uniform, he was the oldest man in the room. But in spite of the gray showing at his temples, there was a wiry alertness about him that Barr found to his liking. The agent instinctively judged that Burke was a man to tie to. "I once flew a crate myself," Burke said diffidently, as if he hated to mention his own exploits. "That was while we still had crates to fly. I agree with Barr that a rocket flier is too precious to risk. Anyhow, to take a flier over an armed camp of those gorillas that call themselves Presences is not a risk—it's suicide."

Burke spoke firmly. He talked like a man who knew what he was saying. "I've fought those devils before," he said. "A ship doesn't have a chance in the air above 'em. They have ray beams that are aimed and fired automatically. They will knock anything out of the sky up to fifty thousand feet and above that they are more likely to hit than they are to miss. It's no use going over at night, either, for their sighting devices operate by infra-red light. Darkness or daylight, it makes no difference to them. If we want to

find out what their new scheme is, we've got to figure out something entirely different."

The others nodded slow agreement, to Bruton's evident annoyance, who still insisted that they use the rocket flier. He was overruled.

"How important is it to know what the Presences are doing?" Barr questioned. "Is it worth risking our lives to find out their plans?"

"It is of the greatest importance," Rita said vehemently. "From their preparations, there is no doubt that they are making one last final effort to conquer this continent, to end the stalemate that has existed for the past nine years. If they succeed—well—if they win this time—I don't need to try to tell you what that will mean."

Barr nodded grimly. Too well he knew how little of the will to resist remained alive in America. If the Presences succeeded in gaining the upper hand just once more, they would stamp out all opposition so effectively that never again would a human being dare to resist them.

"We will discover what they are doing and stop it!" he said. In other circumstances, the words would have sounded like foolish bravado, like the boasting of a braggart who has never smelled the smoke of battle telling what he will do when the fight comes. But there was a grimness in Barr's voice which showed he was not boasting. He knew how great were the odds against them if they approached a place the Presences had declared *verboden*. The odds were a hundred to one they would not succeed—but it was a risk that had to be taken. If they died in the attempt—well, they would join the unnumbered millions who had already died fighting those incredible monstrosities who called themselves Presences.

CHAPTER IV

The Monster from the Sea

"IF YOU want to see it," the old man said, "you just sit here and watch. It will be along pretty soon. It hasn't missed a night in the last two weeks."

Barr was crouched at the edge of a sand dune, looking out over the sea. Rita was beside him. Four days had passed since they left New York. During this time they had worked their way carefully down the coast. Directly to the south of them, less than a mile away, lay the edge of the forbidden zone.

Rita had brought them to a tiny fishing village, a collection of rude huts, where she was known. Bruton, Harder, and Burke were back in the village now. The guide who had brought them to the edge of the ocean had once been the mayor of the fishing village, in the days when it was a prosperous little summer resort. Now he was a shaking gray-beard, haggard with superstitious fears. He crouched in the sand, stared out across the somber darkness that was the Atlantic.

"It'll be comin' pretty soon now," he muttered.

"Don't you have any idea what it is?" Barr questioned.

"Not the least idea, mister."

"But you've seen it," Barr protested. "What does it look like?"

"It don't look like anything I ever saw before," the old man answered. "It comes out of the sea, flashin' lights and screamin'. It heads right straight into the forbidden zone, but what it is I don't pretend to know."

"It must be a boat," Barr said. He wondered where the Presences had gotten a boat. All ocean-going vessels had long since been smashed or sunk, but perhaps they had found one somewhere

and had managed to patch it up."

"It ain't no boat, mister," the old man said vigorously. "It don't float on the surface. It *wades* out of the sea."

"Wades!" Barr gasped. "You must be mistaken. How could it wade out of the sea? The ocean is half a mile deep not far out there."

"I don't know how it does it, I only know it does!" was the vigorous answer.

"Sh!" Rita spoke. "There's something coming now." In the darkness, Barr sensed rather than saw her upflung arm pointing out to sea. He crouched motionless on the sand, watching.

The ocean was dark. There was no moon. Except for the whispering of the waves on the beach, there was no sound. The dark, brooding sea and the too-still night gave the agent an impression of weirdness. A cold chill passed up his spine.

Far out on the dark expanse of waters, a tiny light flashed. It flickered once, went out. Once, in the long ago, lighthouse beacons had flickered like this along these shores, but this was no beacon from a lighthouse.

They waited. Their guide was mumbling to himself in what sounded like a prayer. Barr saw that the old man was kneeling. He touched the girl.

"Sh," she whispered. "His wife and two children were killed when his town was destroyed. He has never recovered from the shock."

"Poor fellow," Barr said sympathetically. He felt sorry for the man, yet he knew that this was only one case among millions of similar cases.

The light at sea winked on again. It was closer now. It blinked out. Across the surface of the waters came a low moaning sound. It died into

silence and an echo ran along the shore.

"Here it comes!" the old man whispered. "Here it comes. Watch it close, mister."

SOMETHING came slowly out of the sea. It was a mile away and in the darkness Barr could not see what it was. He strained his eyes, cursing futilely at the weak star light. All he could tell was that something monstrously huge was walking out of the ocean. He caught vague glimpses of a huge bulk moving ponderously ashore. There was no question but that it was wading out of the water.

It went directly into the forbidden area.

"It's a god!" the old man croaked. "The Presences are gods! They've made another god to help them. Power to the Presence!" he hastily added as he remembered the phrase that must always be used when the name of the Presences were mentioned.

"Power to the Presence!" Rita quickly echoed.

"What—" Barr said.

"Say it!" the girl said fiercely.

"Power to the Presence!" Barr said. He looked at the girl.

"When we are with others, we must always use the phrase they have commanded," she explained. "When we are alone, it is not necessary. Now, what was that thing?"

"I have no idea," Barr answered.

"It's a god," their guide spoke again. "They're gods. It's helping them."

"They aren't gods!" Barr snapped.

"Then what are they?" the old man quickly asked. There was a wild, panicky note in his voice. He was on the verge of hysteria. Barr decided to humor him. Otherwise the old man might go mad.

"We don't know too much about

them," Barr said. "But we do know that in their own language they call themselves Uighurs.* We know that they came from one of the most desolate regions on earth, the hinterland back of Tibet. There, in a series of valleys shut off from the rest of the world by high mountain ranges, they must have existed for centuries. The rest of the world did not even guess that they existed. There must have been millions of them in these valleys. How many there were we do not know. But we do know that they were infinitely farther advanced in science than we were. They had weapons that killed in the flash of a beam of light, they had bombs no bigger than hand grenades that would destroy whole city blocks, and—worst of all for these were the hardest to fight—they had flying battleships, gigantic fortresses armored with inches of the hardest steel, weighing thousands of tons—"

His voice faded into silence. He could not bring himself to describe the way the Uighurs had come out of their remote fastness, swarming over the

world. They had come in the year that he was born, and he remembered nothing of it, but he had been told what had happened then—the world stunned by a sudden threat of capitulation or destruction. Hitler in the old days had never threatened more violently or had backed up his threats with more furious destruction. The Uighurs had power; they had power to burn, power to throw away. From fifty thousand feet they could drop a rain of bombs, tiny little bombs, that fell by the hundreds on a city. Bingo! There was no more city. They possessed at least fifty flying battleships, and so many cruisers and lighter craft that no successful count had ever been made of them. They did not hesitate to state their intentions: they were out to conquer the world.

The world simply did not believe them. It was impossible for any such small minority—and compared to the two billion population of earth, the Uighurs were certainly a minority—to rule a planet. No doubt the peoples of the Thirteenth Century felt the same way about Genghis Khan. That wild

* Uighurs—The real origin of the Uighurs remains one of the unsolved mysteries of science. There are three theories on the subject, the first, that the Uighurs were descendants of the Dune Dwellers, that lost race which flourished some 20,000 years ago in what is now the Desert of Gobi, leaving behind them thousands of artifacts, stone weapons, beads, etc., which are only now coming to light. This theory holds that the Dune Dwellers, who mysteriously vanished from Gobi, found refuge in hidden Himalayan valleys, and remained lost to the world for centuries, during which time they developed their science to dizzy heights. The second theory stems out of the first. It accepts the Dune Dwellers or some other primitive race as the ancestors of the Uighurs, but presents the interesting idea that these hidden people underwent an evolutionary mutation which greatly increased their brain power, the increased mental ability in turn enabling the Uighurs tremendously to develop their scientific knowledge. Whether or not such a mutation took place is not known, but it is known that the Uighurs, to put it mildly, were an exceedingly intelligent people. There is no questioning their mechanical genius. On the other

hand, they were hopelessly under-developed in their ideas of government. They still retained a despot as supreme ruler, they had no knowledge whatsoever of the democratic process, for a long time they apparently did not know there were other races on earth, and when they discovered the existence of other peoples, they did not, and apparently could not, consider the problem of living in peace with their newly discovered neighbors but only how to conquer them. They could only conceive of themselves as masters, the rest of the world as slaves.

The third theory of the origin of the Uighurs holds that they were not earth-born at all but were a race from some other planet or some other star system, that this race had landed on earth at some remote time in the past, and had remained in hiding, developing their strength against the time when they would be strong enough to master the planet. The supporters of this theory offer in evidence the fact that the Uighur airships possessed some method of nullifying the effect of gravity and were capable of inter-planetary and quite possibly of inter-stellar flight.

Which theory is true is not known.—Ed.

barbarian rode with his legions from an area to the north of the place of origin of the Uighurs and at the most, his fighting men did not number more than a few hundred thousands, no great force. Yet that force was disciplined as no other army in the past had ever been disciplined and it had new tactics and new methods of fighting. A few hundred thousand men could not conquer the world, yet the time came when the Golden Horde of Genghis Khan was known and terribly feared from the borders of Korea to the plains of Poland. In that sweep of thousands of miles of country—the then known world—Genghis Khan was master.

In the Twenty-First Century, eight hundred years later, the Uighurs came. Like the Horde of Genghis Khan, they came with new weapons, new methods of fighting, and a new discipline. They struck at a world that had known complete peace for one hundred and fifty years, at a world that, since the downfall of the last posturing little conqueror, Hitler, had known nothing of war.

THE peace of one hundred and fifty years had one terrible consequence—men had forgotten how to fight. More, they had forgotten the will to fight. They were sick of war, they wanted none of it. They had beaten their swords into plowshares. Now, when they needed swords again, they discovered they had to fight with plows, because they did not know how to beat them back into swords. They couldn't fight.

They tried. They came of warrior races and though they might have forgotten the arts of war, they had not forgotten anger. In their terrible anger they tried to fight. They took their huge stratosphere transport planes, designed to carry cargoes anywhere on earth, and armed them. Out of ancient

armories they dug forgotten anti-aircraft guns, pointed them at the sky. They set their factories humming, building new weapons. Their laboratories went to work, designing new guns. Men, millions of them, began drilling in the old orders, forming armies.*

The only thing wrong with armies was that they were no good. The Uighurs had no armies. They fought from the sky. They could pass miles above an army, dropping a rain of ten pound bombs. In the area where those bombs fell, life ceased to exist. The armies were disbanded. They were broken into small groups. The small groups survived. Even the Uighurs could not bomb *all* the surface of the earth.

They could, and did, bomb cities. They could bomb industrial areas. They could blow up power plants, smash ship yards, ruin factories, but they could not strafe every hole in the ground, every ditch, every hillside. The human race, whom they had regarded as fit only for a vast slave population, fought back at them.

Huge stratosphere transport planes, crammed with hundreds of tons of explosives, were made into flying projectiles, ramming the vast air liners of the Uighurs. The planes were flown by robot pilots, operated by remote control. When they could sneak up on an Uighur

* A complete account of the war between the Uighurs and the rest of earth would require volumes. It was fought on a dozen fronts and in thousands of separate engagements. There was no question but that the ships of the Uighurs were stronger than any ship that could be brought against them. Strength was on their side. But numbers were on the side of the other races. The Uighurs slaughtered millions; other millions rose against them. The war developed into a grim battle of attrition, with the Uighurs destroying cities, factories, power plants, transportation systems. Then hunger and disease fought on their side. Hunger and plague killed more people than they ever did, but after a man is dead it does not matter whether he died of hunger or in a bomb blast—he is no longer a fighter.—Ed.

battleship and ram it, that ship would cease to exist except as a rain of metal fragments plunging to the earth.

The trouble was—the Uighur ships were wary. It was not easy to sneak up on them. And they possessed weapons that would knock down a lumbering transport before it had a chance to reach them. Also, due to the destruction of factories, the transport planes were increasingly hard to build. For five years the battle continued. The Uighurs were winning slowly but surely.

But they were not winning fast enough to suit them. Consequently they took a leaf out of the history of the past. From all over the earth, they collected thousands of prisoners, removed them to their Tibetan citadel, showed them the might of the Uighurs, treated them well, gave them a stiff course in propaganda, and returned them to the places where they had got them—as fifth columnists who advocated collaboration with the Uighurs. They could not have struck a more cunning blow. Millions of bewildered people, sick of the unequal struggle, were taken in by this propaganda line. Thus the Joiners were born. They believed in joining the Uighurs.

If they could have proceeded uninterrupted for a few years, the Uighurs would have won a complete victory by this means. But they were not allowed to proceed without interruptions. The Council of Scientists had been formed. This council, which comprized the keenest minds on earth, succeeded in discovering the secret of the powerful bombs the Uighurs used. Then it devised a plan. Every plane that could take the air was quietly assembled in Tibet. Robot pilots were installed. The planes were loaded to the gills with atomic bombs, and one dark night, the whole mighty fleet was launched at the citadel of Uighur power, the workshops and

the cities hidden in the Tibetan fastnesses. Thousands of tons of atomic bombs went off at the same instant.

THE explosion was heard all over earth. It blew a hole in the ground two miles deep. It blasted a mountain range out of existence. Within an area of fifty miles, no life remained. Its jarring action was so widespread that it set off earthquakes in California. Volcanoes came to life in Alaska and in Japan.

The citadel of the Uighurs, their laboratories, their factories and their workshops, went out of existence in one cataclysmic explosion.

This one act should have brought victory. It didn't. Uighur ships were scattered all over the earth. These embarked on a program of revenge. When they had finished dropping their bombs, no large city on earth remained untouched. No factories remained, no mines, no steel plants.

The result was stalemate. The Council did not possess the means to build new weapons. The Uighurs did not possess the means to build new ships. And, as the years passed, one by one the ships of the Uighurs were forced out of the skies, by the impossibility of effecting repairs. Too late they learned that their revenge, by destroying mines and steel foundries, had removed the sources of the metal they needed to repair their battleships of the sky. If they could secure metal they would be able to repair their ships and would unquestionably become the dominant race on earth. If they could break the stalemate, there would be no stopping them a second time.

"But they aren't gods," Bruce Barr said. "If you had called them devils, I would have agreed with you."

The old man refused to be reassured. He had seen too many instances of the

power of the Presences, as the Uighurs insisted all Joiners call them. His attitude was precisely the viewpoint the Uighurs tried to force their followers to accept. Men who thought the Uighurs were gods would not fight against them. Fighting gods was useless.

"You take him back to the village," Barr said to the girl.

"All right," she answered. "But what are you going to do?"

"I'm going over there," he said. He swung his arm in an arc that indicated the forbidden area.

"You're going into *that*?"

"Sure."

"But you don't have a chance. They'll catch you. They're certain to discover you. They'll kill you—" There was a frantic note in her voice. It faded abruptly into silence.

"I've got to know what that sea thing is," he said. He turned, started to walk down toward the shore.

"Wait, I'll go with you," she said.

"You—" For a moment the preposterousness of her suggestion left him speechless. She wanted to go with him! It was impossible. But there was also something about it that was heartwarming. "Sorry, Rita," he said. "One person has a chance. Two people double the danger. It's nice of you to want to go but—"

He turned, walked away into the darkness. She made no attempt to follow him. The last glimpse he had of her she was staring after him.

A few minutes later, he approached the border of the forbidden area.

CHAPTER V

In the Uighur Camp

AHEAD of him, Barr could see the barricade, stakes driven into the

ground, their sharp points leaning outward. A ring of searchlights illumined it. Behind the barricade, so arranged that their fire could sweep every foot of it, were the small, portable ray projectors of the Uighurs. He could see Uighur guardsmen on duty there. The Presences were guarding this barricade with their own men, which showed how important they considered the work they were doing here. Normally they used Joiners as guards. But not here! This barricade was guarded by the Presences themselves!

Barr studied the line of pointed stakes. He could see no place where he could slip through without being seen. The damnable floodlights made the whole scene as bright as day.

"Rita was right," he thought. "I can't get through here."

He had to get through! In the distance he could see a glow in the sky, a glow that could only come from many lights. It was this glow that he particularly wished to investigate. To do that, he had to pass the barricade.

He pulled the pistol out of his pocket, looked at it, then looked at the barricade. His face set in grim lines. For a moment, so fierce was the expression on his face, an onlooker might have thought he was going to charge the barricade with only the pistol as a weapon. He had no such intention. He took a piece of cloth out of his pocket, wrapped the pistol in it, took off his leather cap, placed the pistol in that, then slid silently down the beach and into the sea. Silently he waded into the water. Then he began to swim. He swam slowly and easily, out to sea, using a breast stroke that did not break the surface of the water.

One floodlight was set directly on the beach, its beam pointing out to sea. He swam out and out, then turned and floated slowly into the beam of light.

The water was cold. He could feel his heart pounding heavily. At any moment he might be seen. His flesh crawled at the thought. He kept swimming. No shout came from the shore. He swam through the beam of light and into the kindly darkness. He sighed in relief. He was past the barricade.

An hour later, Barr, concealed in a tangle of underbrush, was staring in horror at the scene before his eyes. He had reached the place where the glow in the sky originated. The glow came from hundreds of floodlights. Men, thousands of them, the slave gangs gathered by the Presences, were at work. The Uighur technicians, hundreds of them, were working too. Barr saw what they were doing.

One of the Uighur flying battleships had been forced down here. This must have happened years in the past, for the gaunt steel skeleton of the skull had rusted badly.

The Uighurs were rebuilding this ship! Gangs of slave workers were stripping away the badly rusted plates. Other gangs of workers, under the careful supervision of Uighur scientists, were busy putting new plates in place, new plates made of gleaming steel! In the background Barr could glimpse huge furnaces belching flame to the sky. He knew what they were—atomic furnaces that were being used to melt and shape the steel plates.

The Uighurs had managed to obtain a source of metal. They were rebuilding one of their flying battleships. With that ship fit to fly again, they would be supreme. Nothing could stand against them. Nothing! If they once succeeded in rebuilding this ship—

THEY must not succeed. They had to be stopped. How? Barr's mind flashed back to this tiny rocket flier, hidden in the Hudson valley above New

York. There were atomic bombs in that ship, bombs that would blow hell out of anything they hit. A dozen of those bombs, striking here, would spread fragments of this battleship over half a county, especially if they struck the atomic furnaces. Bombing this area would be a risk, especially since the Uighurs were undoubtedly determined to protect it at all costs. Damn the risk! It had to be taken. There was speed in his ship, speed to burn the wind. He would come over at a thousand miles an hour, come in on a long dive from out to sea, pass over so low the anti-aircraft beams would not be able to function, loose a sudden rain of bombs! Surprise would be on his side. The Uighurs were on the alert but they did not suspect the existence of a rocket flier and they would not be watching for one. Before they had time to organize their defenses, he would be over and gone.

He turned to slip away. He would need several days to reach his rocket flier but once he had reached it, he would be back here in minutes.

As he turned, he looked full into the blinding beam of a flashlight that had suddenly been turned on.

"Hands up!" a harsh, guttural voice grated in his ears.

He was trapped. For a split second, he crouched, deciding whether or not to run.

"If you move, we'll burn you!" the voice said again.

From the tone, from the harshness with which the words were spoken, and from the odd accent, Barr knew the truth. This was no Joiner patrol, armed with bows and arrows. This was a Uighur patrol. The Presences themselves had caught him. Slowly, an inch at a time, he raised his hands.

"Is better," the guttural voice spoke. There were three of them. One was holding the light, the other two were

covering with deadly little projectors. They stepped closer.

"Turn around," the leader said.

Barr obeyed. To disobey would be to invite instant destruction. Rough hands went over him. When he had come out of the sea, he had taken the pistol out of his cap and had put it back into his pocket. They found the pistol. The leader grunted. Even in that moment Barr noted the lack of surprise in the leader's voice. It was as if the Uighur had expected to find the pistol, had been looking for it.

"Turn around again," he was ordered.

The light was focused on his face. He felt the keen scrutiny of the three Uighurs behind the light. They were studying him, looking him over. He was wearing a Joiner uniform but that would not gain him anything. The uniform was still wet, which could only mean that he had swam around the barricade. Besides, they had found a pistol on him. The pistol damned him. Even Joiners were not permitted to have pistols, especially Joiners found spying in a prohibited zone.

"Shoot me and have it over with," he grated. There was a blank feeling in his mind. All he could think of was that he had been caught. He was doomed. A short, quick death would be infinitely better than questioning at the hands of the Presences. He defied them in the sullen hope that they would be enraged enough to shoot him.

They didn't shoot. They seemed not to have heard him. Quietly they studied him and their quietness was an infinitely greater threat than bluster would have been. What were they going to do with him, he wondered.

Suddenly the leader spoke.

"Is he," he said.

The other two nodded agreement.

"Is the spy," the second said.

"Is Barr, the son of Old Barr," the third added.

"It is the man we were looking for," the leader said.

BARR stared at them in stunned astonishment. He could not believe he had heard correctly. They had called him by name, they had said he was the son of Old Barr, the famous leader of the Council of the Scientists.

"What the hell are you talking about?" he demanded.

"Have been waiting for you," the leader said. "Knew you were coming. The Great Presence will be pleased to know that the son of Old Barr has paid us a visit, very greatly pleased!" He laughed.

"You've been waiting for me?" Barr gasped.

"Right," the leader answered.

Barr could not believe his ears. They had been waiting for him. They had known he was coming.

There could be only one explanation for that fact. Somewhere, somehow, he had been betrayed!

"March!" the voice of the Uighur leader grated in his ears. "We take you to the Great Presence, who has some very interesting questions to ask you."

NOGO, the leader of the Uighurs, the Great Presence, was in his quarters when Barr was led in. He was sitting at a desk in a crude but comfortable wooden palace that had been erected for him here on the shore of the sea. Two guards stood rigidly at attention behind him.

Barr was surprised at the appearance of this Uighur. He had expected to find a barbarian, a huge hulk of a man dressed in a glittering uniform, his breast a blaze of medals, seated on a throne. Nogo was none of these things. He was wearing a plain leather uniform

and except for the tiny golden lion heads on his shoulders, he wore no medals.* Instead of a throne, he was seated at a simple desk that might have belonged to anyone. There was no sign of ostentation about him anywhere. He looked like an ordinary private.

Yet he was Nogo, the Great Presence, the supreme leader of the Uighurs. He was the man who had planned the Uighur attack on the peoples of earth. He had been cursed in every language spoken on the planet, he had been—and still was—hated and feared in every place where free men gathered.

Ever since he had been able to talk, Barr had heard tales of this terrible man. It was Nogo who had ordered the massacre of a hundred thousand hostages held in New Orleans. It was Nogo who had decreed that London should be blotted from the face of the earth. He had committed a thousand crimes and nowhere had he done an act of mercy. Hearing the tales of this man, Barr had expected to find a beefy barbarian.

Instead he found a slender, suave, pleasant-faced individual. Nogo had the round face, the high cheek bones, and the slightly slanted eyes of the Mongol. He didn't look dangerous. Only the hot lights in his shoe button eyes showed the volcanic fury seething beneath.

Barr recognized him instantly. Once, as a part of a Joiner campaign, this suave face had appeared on a million posters. It had even been rumored that Nogo had died.

He hadn't died. He was here, in perfect health. At the sight of him, Bruce Barr gave up all hope of living.

Nogo sat quietly regarding him.

* Instead of using stars to designate the rank of a general, the Uighurs used tiny golden lion heads. They considered the lion as king of beasts and an officer who wore the lion's head, they considered as king of men—Ed.

Then, at his signal, the three Uighurs who had captured him saluted and left the room. The two guards did likewise. Barr found himself alone with Nogo.

"I am informed that you are Bruce Barr," Nogo said. "Is that correct?"

"Yes," the agent answered. Denial would gain him nothing. The patrol had already reported his identity.

"The son of James Barr?" Nogo continued.

"Yes," Barr said. He stood stiffly erect in front of the desk. In his mind was the wild thought that perhaps he could leap across the desk, throttle this Uighur leader before Nogo could call for help. It was a chance in a million but it was the only chance he had. They would certainly execute him for attacking Nogo but they were going to execute him anyway. Might as well be hung for a sheep as a lamb. He tensed his muscles for the leap, then stopped stunned at what was happening.

Nogo was rising from his seat. There was a pleasant smile on his face. He was holding out his hand. "It is a pleasure to meet the son of so distinguished a man," Nogo was saying. "Yes, Barr, it is a pleasure to meet you. I have often wanted to meet your father but the opportunity has been denied me."

Barr was too surprised to take the outstretched hand. That Nogo should offer to shake hands with anyone on earth, let alone with one of his most deadly enemies, was inconceivable. The Uighur leader seemingly did not notice that Barr did not accept the proffered hand. Instead he pulled a heavy chair to the side of the desk and smilingly invited Barr to be seated. From his desk he took a box which he opened. Barr noticed the box was made of gold and was studded with precious stones. It was filled with something almost

equally precious—cigars.

"Do you smoke?" Nogo said taking no notice of Barr's confusion. "These are my own private brand, the remnants of the stock I had made for me before—ah—it ceased being possible to obtain them. I think you will find them to your liking."

"*You—want me to—sit down?*" Barr gasped. In his mind was the thought that he had gone mad, that he was suffering from an hallucination. No man, Joiner or otherwise, was ever permitted to sit down in the presence of even the humblest Uighur. One only sat down with equals and the Uighurs regarded no one as their equal. Yet here was Nogo, the Great Presence, not only asking him to sit down but pulling up a chair for him with his own aristocratic hands! It was madness of the highest order.

NOGO seemed to enjoy the confusion he had created. "Nonsense, Barr. Don't stand there staring at me as if I were an ogre. Of course I want you to sit down. Please be seated." The Great Presence waved his hand invitingly toward the chair.

Barr sat down. "What is this all about?" he demanded. He was committing a serious error and he knew it. One did not make demands of the Great Presence, one did not ask questions of Nogo. Strangely, the Uighur chieftan took no offense. There was a faintly amused twinkle in his eyes as he looked at Barr.

"It is quite simple," he said. "I want you to do something for me."

"You want me—" Barr could go no farther. The idea that Nogo could conceivably want anything of him was beyond his imagination.

"That is right," Nogo said. "I want you to carry a message to your Council.

Inasmuch as you are the son of the leader of the Council, I assume that you will know how to reach them. The message I want you to carry is this," Nogo paused, looked thoughtfully at the slender cigar he was smoking. He appeared to meditate, to be choosing his words with care. "That the war shall end!" he spoke suddenly, abruptly, the words coming in explosive gusts of sound. "That there shall be peace between your people and my people. That fighting shall stop now and forever. That the Uighurs and your people shall work hand in hand at the common task of rebuilding a shattered world."

If an old and hungry man-eating tiger, coming suddenly upon a defenseless child in the forest, should refuse to attack the child and instead sit down and weep in repentance for all the other people he had eaten, the effect would have been no less startling and no less contradictory than a peace proposal from the lips of Nogo. And yet a peace proposal was a beautiful dream. That the war should cease, that fighting should come to an end— And there was no question but that the help of the Uighurs would be invaluable in rebuilding what had been destroyed. The Uighurs were the world's cleverest technicians and in the long centuries they had spent in their Tibetan citadel, they had amassed a vast store of scientific knowledge.

"Do you really mean it?" Barr whispered. He could not raise his voice above a whisper.

"I certainly do," Nogo answered firmly. There was a sad smile on his face. "I don't mind admitting to you that I have had a change of heart. I have come to see how useless was all the destruction I have loosed, how senseless was the slaughter I have ordered. Believe me, Barr, if I only could, I would set back in place every building I had

torn down, I would breathe life back into every man I have killed."

Nogo rose to his feet, began to pace the floor. He looked like a restless ghost sorrowing over the enormity of its sins.

"You really want peace?" Barr asked.

"Most emphatically," Nogo answered. "I am sick of war, sick of fighting, sick of slaughter. I want no more of it." The fury faded from his voice. Again the sad smile came to his face. "Believe me when I say I am sorry for all the suffering I have brought to your people. Now, will you carry to your Council my peace message?"

Barr could not answer. A peace proposal from Nogo was too good to be true. He sensed a trap of some kind.

"If you are really sincere in your offer, why are you building this battleship?" he questioned. There was the flaw in Nogo's argument! If the Great Presence really wanted peace, why should he so frantically rebuild a fallen battleship?

"Because—" Thunder roared in Nogo's voice and fire flashed from his eyes—"because—and carry this message to your Council also—if I cannot have the peace I want, I will have mastery! I am offering peace. If it is refused, I will use this battleship I am rebuilding to destroy utterly every vestige of resistance to my will. Carry this message to your Council. Shall it be peace or shall it be war?"

BENEATH Nogo's suave exterior a lion slumbered. The lion came to life now, roaring its threat. "Carry my message to your Council!" Nogo thundered. "I assume you know where they are in hiding. I also assume you know how to reach them or at least how to communicate with them. Tell them to choose—for peace or for war!"

Before Barr could speak again, Nogo

had clapped his hands. A guard quickly entered the room. To the guard Nogo said, "Escort this man beyond the barricades. See that he is unharmed. I shall expect him to return within two weeks. See that he is permitted to enter in safety."

"Two weeks, Barr, to carry your message. Is that enough time?"

Barr dazedly nodded. Two weeks would be more than enough time to fly to the hiding place of the Council and to return.

"Then take my message and go," Nogo thundered.

It was a surprised American who found himself escorted in safety beyond the barricade. He was alive! There was reason for surprise in that fact alone. When the Uighurs had caught him, he had thought his day had come. But instead of killing him, the Supreme Presence had sent him as a messenger to the Council, bearing an offer of peace. That Nogo, or any Uighur, should offer peace, was bewildering.

Was Nogo's offer a trap? Was it a ruse? Or was the offer genuine? What would Nogo gain by making a false offer of peace? Barr did not know the answer to any of these questions but there was one fact that kept coming back to him—the Uighurs had known he was coming. They had been on the lookout for him. That could only mean— Well, what could it mean?

He trudged along the sea shore toward the tiny fishing village where Rita and her companions were waiting. He was curious to see how they would react to the news he was bringing.

CHAPTER VI

Bruton's Terrible Secret

"WHERE in the hell have you been?" Bruton demanded, as

Barr entered the hut where the latter was staying. "Where is Rita?" He looked past Barr to the door.

"Rita?" Barr asked. "Isn't she here? I sent her back with the mayor."

Bruton seemed relieved. "Then I guess she is still with him," he muttered. He looked at Barr. "Where have you been?"

"To the camp of the Uighurs," Barr answered.

He expected his announcement to make a sensation. It didn't. Everything got so quiet in the room that the popping of the smouldering bed of coals in the crude fireplace sounded excessively loud. Bruton didn't say a word. He looked up at Barr. There was a sudden tenseness on his heavy features. Nor did Burke or Harder speak but Barr was aware that they were looking intently at him.

"You've been where?" Bruton spoke at last, his voice choked and heavy.

"To the camp of the Uighurs," Barr answered steadily. "I have been talking to Nogo himself."

For a second, after Barr spoke, there wasn't a sound. Then, without speaking, Burke leaped to his feet. A knife glittered in the old flier's hand. He launched himself straight at Barr.

Barr leaped backward. He didn't have a gun. The Uighurs had not returned the pistol they had taken from him. And, of all the things he had expected to happen, he hadn't expected an attack without the slightest sign of warning. He leaped backward, lifting his fists.

As Burke charged toward him, Bruton thrust out a foot. The flier tripped, went down with a crash. Cursing he tried to get to his feet. Bruton knocked the knife out of his hands, fell on top of him.

Burke was mad with rage. "Let go of me!" he shouted, trying to point at

Barr. "That man has betrayed us. If he has been talking to Nogo and has returned to us, it can only mean that in exchange for his life he has agreed to lead a Uighur patrol to us."

Barr listened in amazement at the charge. He had certainly not anticipated that this would happen. But now that it had happened, he could see the logic back of Burke's reasoning. A man who said he had been talking to Nogo, the Great Presence, was either crazy or he had betrayed his fellows. No one had ever talked to Nogo and remained alive to tell the story.

"Easy," Bruton said. He spoke to Burke but his eyes never left Barr. He had drawn a pistol.

"Shoot him," Burke demanded. "I don't give a damn if he is the son of the leader of the Council. He has betrayed us. Shoot him."

"I'll shoot him if it's necessary," Bruton answered grimly. "But first, let's see what he has to say. There is a possibility that we might not want to shoot him. Talk, fellow," he said to Barr. "You say you have been inside the forbidden area. How did you get through the barricade?"

"I swam around it," Barr answered.

This made an impression on them. Swimming around the barricade was so simple they had not thought of it.

"Damn me for a dumb ox!" Bruton grated. "I hadn't thought of that. Go on, Barr. What is this nonsense about talking to Nogo? Did you really talk to him?"

Barr told them exactly what had happened, how the patrol had captured him, how they had taken him to Nogo, and what Nogo had said. He omitted only one item, the fact that the Uighur patrol had known he was coming. When he had finished there was amazed incredulity on their faces.

"He actually sent you as a messenger

to the Council, asking for peace?" Bruton dazedly whispered.

"That's exactly what he did," Barr answered. "I don't blame you for not believing me. I couldn't believe it myself. But Nogo seemed sincere. He seemed really to want peace. He says we can have what we want—peace or war—but if we choose war, he is rebuilding a battleship that will give him supreme power."

A GAIN there was silence in the room but this time there was no threat in the silence. Burke slowly got to his feet. He seemed to have forgotten that a few minutes before he had been wanting to kill Barr for a traitor. "Peace!" he whispered. "A chance to walk in the streets without wondering when the next bomb is coming down, a chance to live a normal life. Food. Clothes. A job. No more fighting. Peace—"

"Do—do you think Nogo really meant what he said?" Harder spoke. The radio expert was trembling.

"I don't know," Barr answered frankly. He was closely watching the reaction of these three men. They were no longer threatening him. Their whole attitude had changed. When they learned the message he carried, they ceased thinking he was a traitor. "That is a matter for the Council to decide."

"How are we going to get the message to them?" Bruton questioned.

"I thought we might return to New York and use our secret radio," Barr said. He looked at Harder. "Is your equipment in operating order? Can you get a message through to the Council?"

"Certainly," the radio man promptly answered.

"I'm afraid it won't work," Bruton said. The black-bearded giant seemed lost in thought.

"Why not?" Harder demanded. "I

have been in contact with the Council radio station many times."

"I grant that," Bruton answered. "And you also know how many times you have wondered whether you were really in contact with the Council station or with some Uighur station trying to track down our hidden transmitter. In something as important as a peace proposal coming from Nogo himself, the Council is not likely to believe any radio message is authentic. No! The radio is out." He turned to Barr. "Don't you agree with me?"

Barr hesitated. He knew from personal experience how little trust the Council put in radio reports, even when the reports came in on secret bands and were in code. The Uighurs were too expert in the use of radio for it to be trusted. Barr nodded slowly. "But how are we to get the message to the Council? I have only two weeks to bring back an answer—"

"I've got it!" Burke suddenly interrupted. "Your rocket ship! You fly back to the Council and make a personal report. They know you and when you report in person, they will have no choice except to believe you."

"That's the answer!" Bruton spoke enthusiastically. "We'll start immediately. That is," he looked at Barr, "if that is all right with you?"

Barr nodded. There was no time to waste. Cutting across the country, they would need at least six days to reach the spot where he had hidden the ship. It would be a hard, tiring journey and every mile of it would have to be made on foot. But it had to be made and the quicker they got started, the better. "I'll go find Rita," he said. "We'll start in ten minutes."

THE girl?" the mayor asked blankly, when Barr had nudged him sufficiently awake to answer questions.

"But she went after you! Do you not know where she is?"

"She went after me!" Barr blankly repeated. "What the devil are you talking about? I sent her back here, with you."

The old man shrugged. He was sleepy and a little scared. "You *told* her to come back with me," he explained. "But because you tell a girl to do something does not mean she will do it. She sent me back alone. Then she swam out in the ocean, after you."

Rita had followed him into the forbidden zone! She, too, had gone around the barricade. And—she hadn't come back!

"I'M GOING after her!" Barr said grimly. He had returned to the hut where Bruton, Harder, and Burke were waiting. Quickly he explained what had happened.

"You will do nothing of the kind," Bruton said bluntly. The bearded giant seemed to be boiling with rage. "If she wants to make a fool of herself by following you into the Uighur camp, she will have to look out for herself. You aren't going back after her. You have a job to do."

"But—"

"There are no buts!" Bruton exploded. "She will have to look out for herself. She is only one person. If she gets killed, it will be unfortunate. But you are the person who carries the peace proposal to the Council. If you try to rescue her and get yourself killed, Nogo may not make another peace offer. I am sorry about Rita but the whole future of the human race may depend on whether or not you get Nogo's peace message to the Council."

There was fury in Bruton's voice. For a moment Barr faced the bearded giant, tempted to tell him to go to hell. But he realized the truth back of Bru-

ton's words. It was of the utmost importance that the peace proposal reach the Council, so important that beside it even Rita's safety did not matter. He also remembered another fact—the Uighurs had known he was coming. Somebody had told them about him. Rita had entered the forbidden area.

He tried to put the thought out of his mind but it persisted in returning. Someone had betrayed him to the Uighurs. Rita *might* have done it. It might have been someone else. He didn't know the name of the guilty person. All he knew was, in the bitter struggle going on, no one was ever certain who was friend and who was foe. As bitterly as he regretted it, there was only one thing to do—leave Rita behind. If she had betrayed him, she was in no danger. If she had not betrayed him, she would insist that he leave her behind.

"All right," he said. "Come on."

In silence they filed out of the tiny fishing village, into the night. For days they would be passing through blackened, abandoned country, where the hand of every man would be against them. They would have to travel day and night, sleep when they could, eat what they could find.

The message they carried might bring lights back to the darkness, green to the countryside, cities where blackened ruins now lay. Peace would bring these things. Peace would bring an end to the treacherous battle in which no man knew who was foe and who was friend.

Peace!

CHAPTER VII

Betrayal

THE little rocket ship was still hidden where he had left it! Barr's

heart leaped at the sight.

"Well, we've reached it!" Bruton said. There was a sigh of relief in the voice of the giant. "And I don't mind saying, if it had been another mile, I don't believe I could have made it."

Bruton looked tired. The trip had drained even his rugged strength. Burke and Harder looked equally done in. For hours the old flier had looked as if he was running on his nerve and nothing else. But he had never uttered a whimper, trudging doggedly along.

Burke shook his head. He had scarcely the strength to speak. "Until I walked this far," he whispered, "I never realized what a privilege it was to fly."

"We won't have to walk any farther," Barr said.

"Thank God!" Burke fervently uttered.

Flying really was a privilege. The same distance that had taken days of weary walking they could cross in minutes. The little ship was hidden in a clump of oak trees, the dull gray of its metal sides barely visible. Barr hastened to it. A glance told him that the ship had not been discovered in his absence. He opened the lock, stepped forward into the tiny control room in the nose. Although it was a one-man flier, all four of them could cram into it.

"All aboard!" Barr called out. "Grab something and hold on. The pick-up on one of these babies is terrific."

Directly ahead was an opening between the trees that gave plenty of room for a take-off. Barr had selected this spot for a hiding place with the possible need of a quick take-off in mind. All he had to do was warm the tubes. He strapped himself into the pilot's seat, reached for the buttons on the control panel in front of him.

His fingers did not touch the buttons. A deafening explosion sounded

behind him. He jerked his head around.

Harder was standing in the lock. There was a silly, dazed expression on his face. In his forehead was a round, bluish hole. For a split second, before the muscles that held him erect learned what had happened, he stood erect. His lips worked, trying to form words.

"You dirty — Uighu — ugh — "Thought you had a radio—ugh—all the time—aaah—" The last was a sigh, the kind of a sound that a dead man makes, the last sound that ever comes from the lips of a human. The radio expert's muscles suddenly discovered they were no longer receiving mental orders bidding them hold their master erect.

Harder slumped downward. He struck half inside, half out, of the ship, slid outside. For a moment there was a quivering rustle from the leaves on the ground beside the ship. Then there was silence.

Burke, squatting on the floor, was not moving a muscle. His eyes were fixed in terrible intensity on one thing—the pistol in Bruton's hand. A little stream of smoke was flowing out of the muzzle of the pistol.

Barr jerked at the straps holding him in the seat, trying to loosen the buckles. At the same time he was looking back over his shoulder. The pistol swung in his direction.

"If you want to die," said Bruton calmly, "just loosen those straps before I tell you to."

Barr could see the giant's fingers tighten around the trigger. He jerked his hands into the air.

"That's better," Bruton said.

"You—you—" Barr choked. He remembered what Harder had been trying to say.

"Yes, I am a Uighur," Bruton said. "The idea that a Uighur might lower

himself enough to pretend to be a Joiner did not occur to you, did it? It did occur to Harder, especially after he caught me operating a tiny radio that I carry. He became very suspicious after that, and I knew he would communicate his suspicions to you at the first opportunity. So I shot him."

Bruton licked his lips.

BARR stared at him in horrid fascination. Bruton was a Uighur! He was a Presence! Too late Barr saw the slight slant of the giant's eyes, too late he realized that the black beard had been grown to conceal the round face and the high cheek bones of the Mongol. An Uighur in disguise! The thought had not occurred to him but it explained a hundred things that had puzzled him.

"You—the Uighurs knew I was coming," he whispered. "When I entered their camp, they were watching for me. You—you told them!"

"Naturally," Bruton nodded. "As Harder discovered, I have a tiny radio transmitter. I used it to transmit information about your movements to the camp. The guards were on the alert for you."

"But why?" Barr almost shouted. "Why go to all of the trouble to let me enter the camp?"

"We had a use for you," Bruton answered.

"A use for me?" Barr whispered. There was a sinking sensation in the pit of his stomach. Even worse than the fact that he had been fooled was the thought that he had been used. "What use did you have for me, other than to carry your leader's proposal for peace?"

"Peace!" Bruton laughed, a harsh, scornful sound. "I thought that peace offer would take you in. Peace! Don't you know that a Uighur never makes

peace except on his own terms? You fool! *What we wanted was this ship!* We used you to lead me to it. And a hard time I had forcing you to use your rocket flier to personally carry the great Nogo's message to the Council instead of transmitting it by radio. We wanted this ship, fool! We wanted it in our possession or destroyed. When you first showed up in New York I tried to get you to use it to fly over the forbidden area. With my warning that you were going to use the ship, we could have knocked it out of the sky. But you—" The Uighur seemed actually angry because his first trap had failed. "—didn't fall for the snare, which forced us to use other methods. And I may say that our fake peace offer took you in completely. As soon as you heard our offer, you led us straight to where we wanted to go—the place where this ship was hidden."

Barr's mind reeled under the torrent of words. He felt sick, mentally and physically. The peace offer had not been genuine! It had been a trap. And he had fallen for it. From the very moment of his arrival in New York, his whereabouts and his intentions had been known to the Uighurs. Probably even the sentinels at the gates had known he was coming. There hadn't been a moment, even a second, when his life had not hung by a thread. At any time, Bruton could have killed him. Bruton had let him live—to lead the Uighur here!

The Presences must think this single rocket flier was damned important.

"You haven't realized how important this ship is," the Uighur said, as if he sensed Barr's thoughts. "If you had chosen to sneak over our camp at sixty thousand feet, dropping a rain of bombs, you could have caused enough damage to stop our construction for a year, maybe longer. If you had known

enough to attack—" The Uighur broke off. His eyes drilled into Barr. "But you don't know enough to attack *that*."

"Attack what?" Barr said.

Bruton bit his lips, as if he had already said more than he intended. "Loosen those straps and stand up!" he ordered harshly. "And if you are tempted to try to jump me, remember we don't need you any more. I would just as soon leave you here with Harder." He jerked a thumb toward the open lock.

Barr disengaged the straps. He made no false moves. Too well he knew how little the Uighur valued his life, now that he was no longer of use to them. With Bruton's pistol covering him, he got to his feet.

"Tie him," Bruton said to Burke. "And do a good job of it."

The old flier had not moved a muscle. He climbed slowly to his feet. Under Bruton's watchful eyes, he did an expert job of trussing Barr and throwing him on the floor.

THEN, somewhat to Barr's surprise,

Burke himself was tied up, the Uighur doing the job efficiently.

"What's the matter, aren't you in on this too?" Barr questioned.

The old flier did not answer. The look of hatred he shot at Bruton sufficiently indicated his feelings.

With his two helpless passengers, the Uighur lifted the ship into the sky, headed south. From inside his clothes he pulled out a tiny radio transmitter. He spoke in Uighur but there was no mistaking the meaning of what he said.

He was reporting to Uighur headquarters the successful fulfillment of his mission!

BRUTON landed the ship in the middle of the Uighur camp. He was received by a crowd of enthusiastic

Uighurs. Nogo himself came out of his quarters to congratulate Bruton.

"They're making quite a hero out of him," Burke said bitterly. The two men were still lying on the floor of the flier but they could see out the open lock. No effort had been made to untie them. The Uighurs were above doing anything for the comfort of their prisoners.

"Do you have any idea what they will do to us?" Barr questioned.

The old flier shook his head. "The best we can hope is that they will shoot us. The next best is that they will put us in one of their work battalions." In spite of his obvious effort to repress it, a shudder passed over Burke as he spoke. The old flier had seen too much of the Uighurs to have any false ideas about mercy from them.

"Anyhow," said Barr viciously, "Bruton sprung his trap too quickly. If he had been able to wait, I would have led him straight to Council headquarters. He could have learned the recognition signals, the location of the labs, everything; then, when they got their battleship finished, they could have blown Council headquarters right out of the ground."

Barr did not doubt that Bruton's original plan had included all this. Somehow Harder had discovered the identity of the Uighur. Harder had paid for that discovery with his life but Bruton had been forced to reveal his hand and the Council was safe. The Council had other rocket ships. Not many. They wouldn't need many. One of them, loaded with atomic explosives, operated by a robot pilot, rammed home against the Uighur dreadnaught, would be enough. The Uighurs, even if they had managed to find the metal to rebuild one ship, could never find the metal to rebuild two. The fight was not yet lost! As long as the Coun-

cil remained in existence, the fight would go on.

"They're up to something new," Burke spoke.

Through the lock, Barr could see the ceremonial backslapping in honor of Bruton had died down. The Uighur and Nogo were in conference. Bruton was urging some course of action and the Great Presence was listening thoughtfully. The conversation was in Uighur, which neither of the two Americans understood.

"I guess it wouldn't make any difference if we did know what they're planning," Burke said. "But just the same, I'd like to know."

"It looks as if we're going to find out," Barr answered.

Bruton and Nogo had finished their conference. Nogo, after nodding agreement, went back into his quarters. Bruton entered the ship.

"I hope you have rested comfortably," he said. He was strutting like a turkey cock. Apparently the praise his leader had given him had been very flattering.

Neither of the men answered.

Bruton looked at Barr. "You are a lucky person," he said. "You find yourself in the enviable position of being able to help the plans of the Presence. Of course you will co-operate."

"Certainly," Barr said. "What do you want?" His voice was heavy with sarcasm which Bruton apparently missed.

"We want to know the exact location of your Council headquarters and we want the recognition signals that will enable your rocket flier to get past the anti-aircraft defenses that no doubt exist."

"You want what?" Barr gasped.

"I plan to go to your headquarters, disguised as a Joiner," Bruton explained. "There I will tell them that

you are held prisoner and will propose a plan for your rescue, a plan, I may add, which will involve the use of all the fliers the Council possesses. I will then lead all your rocket fliers into a trap. Pouf! You will have no more rocket ships!"

BRUTON grinned. He had conceived a daring and audacious plan. And, the worst thing about it, it would work! Barr saw instantly that it would work. He set his mouth in a grim line.

"No sale," he said.

"You mean you will not co-operate?" Bruton demanded.

"That is exactly what I mean," Barr answered.

"But this is a wonderful opportunity to serve the Presence," the Uighur answered. "Such an opportunity is not given to many of your tribe. If you still harbor hopes that your Council can continue to exist, I assure you such hopes are without foundation. Whether you help or not, we shall destroy all resistance organized against us. In that case it is obviously to your advantage to get on our good side now. When we are masters, we will remember those who have helped us. Surely, under these circumstances, you will co-operate."

It was a moving and persuasive argument but it fell on deaf ears.

"I'm not hearing good today," Barr said.

"But—"

"Oh, for Pete's sake, shut up!" Barr snapped. "I'm not having any of your sales talk."

"You mean—"

"In other words, go to hell!" Barr said.

Anger flushed Bruton's face. He started to speak and changed his mind.

"Good boy," Burke grunted.

Bruton stalked out of the ship. Out-

side they could hear him shouting in Uighur.

"You're a brave lad," Burke said quietly. "Knowing you has been a privilege. I didn't know there were men left in the world with the guts to tell a Presence where to get off."

"Knowing me?" Barr whispered. "Why—why the past tense? Do—do you think you won't know me much longer?"

The old flier did not answer. Barr sensed his meaning. It sent a shock to the bottom of his soul. "No matter what they do to me," he spoke from between clenched teeth, "I won't talk."

Burke said nothing. In stolid silence the two men awaited the return of Burton. The Uighur returned, with a squad at his heels. He grunted. Like two sacks of sand, the stolid Uighurs picked up the two men and carried them away.

CHAPTER VIII

The Slave Gangs of the Uighurs

BARR expected torture. Knives, hot irons, whips. The Uighurs, in spite of their scientific knowledge, were savages in the field of human relations. The death of others meant nothing to them. Barr steeled himself. His face set in hard, grim lines. Knobs appeared at the corners of his jaws and his mouth closed to a knife-slit. Death on the battlefield, he could have faced. But whether he could face torture, he did not know. Until the time comes, no one ever knows. Barr's time had come.

The Uighurs carried the two men into a small building. They didn't say a word. Barr caught a glimpse of some complicated-looking machinery in the room where he was taken. There were two Uighurs in charge. Barr

found himself strapped to a rough table. Bruton leaned over him.

"Last chance," Bruton said. "Do you want to co-operate or don't you?"

"Go to hell," Barr answered.

"Don't say I didn't warn you," the Uighur said.

"You can still go to hell!"

Bruton nodded. The two Uighurs who had been present in the room moved up to the table where Barr was strapped down. He could not see what they were doing. He felt one of them touch his arm. There was a sharp prick of pain. It felt like the blade of a sharp knife laying open the flesh. Or the prick of a needle.

"This is it," he thought. He set himself against a repetition of the pain. It didn't come. He couldn't move his head, but out of the sides of his eyes he saw one of the Uighurs laying aside a hypodermic syringe.

They had given him a hypodermic! He was aware that they were watching him closely. "I won't talk!" he thought. "*I won't*—" He found himself staring at the Uighurs. Somewhere in his mind was the vague thought that if he stared hard enough at them he could force them to go away. He stared fiercely at them. Oddly, they began to go away. They seemed to move back, out of his range of vision, out of focus. They were blending into a strange gray mist. They went out of sight into the grayness. The gray mist grew. It came closer and closer to him. It pressed against him, obscuring his vision. It rolled over him, smothering him. He tried to breathe, and choked in a gray cloud. He strained to see, and his eyes brought him only a vision of grayness. He listened. There was a dull throb in his ears and in the distance—in the infinitely far distance—he could hear voices.

"What is the recognition signal?" the voices said.

"Go—to—hell—" he answered.

The mist thickened. It flowed over and around him and through him. It thickened into a pearl-gray cloud so solid he was certain he could walk upon it. He decided to try to walk on it. Well! It was certainly odd to be walking on a cloud!

BRUCE BARR walked for hours in a land of clouds. It was a pleasant sensation, this strolling among masses of tumbling foam, but always on the horizon he was aware of a dark shadow like a black thunderhead threatening storm. In spite of the pleasure of cloud walking, he sensed that somewhere something was not right. He tried to determine what was wrong, but it constantly eluded him, slipping around the edges of his mind like an elusive phantom.

Then abruptly the cloud mass thinned and he began to fall. A scream ripped from his lips. He was falling, falling. He screamed again. He hit the ground with a thump which somehow dissolved the last lingering mists of cloud and opened his eyes.

He was sitting on the ground in a crude hut. Across from him, in an attitude of utter dejection, another man was sitting. The other man raised his head and Barr recognized him. Burke. With recognition memory came flooding back.

Barr looked wildly around. His last memory was of a voice in the far distance asking questions. He had been strapped to a table. Uighurs had been bending over him. Now he was sitting on the ground and the Uighurs were gone.

"What—what happened?" he whispered.

Burke gazed unemotionally at him,

but did not answer.

Barr climbed to his feet, seized the arm of the older man. "What happened?" he demanded. "What did they do to me?" There was frantic fear in his voice.

Burke looked at the ground. "Nothing," he said.

"Nothing!" Barr whispered. "What—what did I do?"

Burke looked up. When he spoke there was no harshness in his voice, no sign of condemnation, but there was so much pain it hurt just to listen to him.

"You spilled your guts," he said.

Barr did not understand. "Do—do you mean I talked?" he choked.

Burke nodded. He looked at the ground. "You told everything you ever knew," he said, his voice hollow and cracked. "You gave them the recognition signals, the location of Council headquarters, landmarks to guide them there. You told them how many men the Council had, how the labs were equipped, how they were defended—" The old flier's voice husked into silence.

Barr sank to the ground. From outside there came the ring of heavy hammers beating steel into shape, the muted roar of atomic furnaces, the shouts of Uighur overseers directing the labor of slave gangs—all the sounds of a vast construction job moving efficiently forward. "What—what did they do to me?" Barr asked.

"Gave you some kind of a drug that made you tell the truth," Burke said.*

"You've been unconscious for

* Scopolamine is such a drug. It is made from henbane and has the strange power of submerging the inhibitory areas of the brain that are used in fabricating self-protective stories—in other words, lies. A person under the influence of scopolamine is deprived of the power of inventing falsehoods. Hence it is frequently called the *truth drug*.—Ed.

hours," the old flier continued. "Bruton loaded your ship with Uighurs disguised as Joiners and took off. He has probably already reached headquarters by now." Burke shook his head. In the gesture was a sadness beyond words.

"I'm sorry," Barr whispered.

"Not your fault," Burke answered. "You couldn't help talking. It's just too bad. That's all—just too bad."

He didn't say any more, but Barr knew what he meant. It was too bad that the last organized resistance to the Uighurs was probably being liquidated at that moment.

Outside the hut the clang of hammers were loud in the heavy air. There was the hiss of cutting torches, the boom of sheets of metal being dropped—all the noise that goes with the repair of a battleship of the air. Above the clamor a step sounded. A Uighur looked in, saw that Barr had regained consciousness. He motioned for the two men to come out.

Burke got slowly to his feet. "We join the labor gangs working for the conqueror," he said. "Come on."

The two men walked out of the hut. "You two go join the gang down at the sea shore," the Uighur snarled. "Get moving!"

Neither man answered. Barr pulled his leather cap down until it shielded his eyes and trudged in the direction the overseer had indicated. There was a droop in his shoulders and a stoop in his back.

AT THE shore of the sea they learned one fact that, a few days before, would have seemed important. They learned where the Uighurs were getting the metal they were re-forging into the new plates for their fallen battleship.

Dozens, hundreds of wrecked ships

were lying on the beach. They were piled up there like so much cordwood. There was nothing as large as an ocean liner or a battleship, but there were cruisers, destroyers, small cargo vessels by the score. Obviously they had come from one place—the bottom of the sea. The hulls were encrusted with barnacles, overgrown with sea weeds. These vessels had been sunk in the early days of the conflict and in earlier wars. They showed the marks of torpedoes and of bombs—great holes gaped in the hulls.

"The only source of scrap metal remaining on earth!" Barr gasped. "Trust those dogs to find it!"

"Shut up and get to work!" an overseer shouted.

They were sent to join gangs scraping barnacles from the hulls, clearing away debris. It was hard, back-breaking work, with no respite. There were no rest periods, no time out for a drink of water, no time out for anything. Other gangs with cutting torches followed them up, cutting the vessels into sections that could be handled. The ships had been under water for years, but there was still good stout steel in the hulls. The Uighurs, in recovering metal from sunken ships, had struck a bonanza. Suggestions for the floating of sunken vessels had been made to the Council, but had been given up as impractical. Pulling ships from the bottom of the ocean was darned difficult. Barr wondered how even the Uighurs had managed to solve the problem. He put the question to one of the men working near him.

A stare and a shake of the head was the only answer. Later, when Barr repeated the question, he whispered, "If you want to stay alive around here, keep your damned mouth shut. The Presences don't like us to do any talking." The man refused to say more.

The question of how the Uighurs managed to get ships from the bottom of the sea remained a mystery. In the dull sickness that had come over him when he learned he had revealed the hiding place of the Council, Barr could not see how the solution of this mystery mattered. Nothing mattered now.

THAT night Barr learned that something did matter. The day shift worked until darkness, a twelve-hour day. Then they were herded away, fed tough cakes made of ground corn. After they had eaten, they were allowed to sleep. Little or no attempt was made to guard them. The Uighurs knew the slaves could not escape through the barricade surrounding the whole area; they also knew that after the slaves had worked all day, they had only enough strength to stagger off some place and fall asleep. Barr had been going at top speed for weeks. The terrible labor on the wrecked ships left him almost completely exhausted. After he had been fed, he staggered into a grove of trees and collapsed. The earth was a hard bed, but that did not matter. He was asleep as soon as he had touched the ground.

He awakened to the touch of an arm on his shoulder. "Bruce," a voice whispered in the darkness. "Bruce. Wake up."

Even in dreams he would have known that voice. Startled, he sat up. "Shh— Don't make any noise," the voice whispered urgently.

"Rital!" he gasped. "Where did you come from? How did you get here?"

"Sh!" she said sharply. "I swam around the barricade. I've been hiding here ever since, trying to find you. I was sure they were holding you prisoner, but I couldn't find you until today, when I saw you with the labor gangs."

"You've been hiding here since the night I swam around the barricade!" he gasped. "Hiding in the middle of the Uighur camp!"

"It wasn't hard. They didn't know I was here and consequently they weren't looking for me. And most of the time I've been hiding in a place where even the Uighurs would never think of looking for anyone. And, Bruce, I've made the most astonishing discovery—"

Her voice was tense with excitement.

"Bruce, I think I've found a way to smash this whole nest of Uighurs. I think I've found a way to stop them, cold!"

"You've *what*?" Barr choked. He seized her by the shoulders. "What are you talking about? What do you mean?" He could feel the sudden pound of his heart as his whole body reacted to what the girl had said. A way to smash the Uighurs! He would give his heart's blood for a way to blast the Presences. If she only knew what she was talking about—

"Sh!" she whispered. "Come over here and I'll tell you."

She crawled silently away in the darkness. Barr followed her. Her words had washed all fatigue from his body. He was wide awake, more awake than he had ever been. Rita knew a way to smash the Uighurs! She led him to a thick clump of trees.

"What have you discovered?" he whispered.

"How the Uighurs get those wrecked ships out of the ocean!" she answered.

"Why is that so damned important?"

"Because I think I know how to stop it. Without metal they will not be able to complete their repair job. And as we stop them from raising sunken ships, at the same time I think we can blow this camp to smithereens. Listen, Bruce—" She looked around in the

darkness, to make certain no one was near them.

From the distance came the muted clamor of hammers beating against steel, the hiss of atomic furnaces, the shouts of Uighur foremen driving their slave gangs. Around them was silence and darkness.

"This is what I have discovered," the girl said.

Barr listened. Her voice was a tense whisper in the darkness. With growing amazement, he heard what she had to say.

Hope began to rise in his heart.

"Rita," he whispered fiercely, when she had finished, "I believe you've got it. I believe you've got the answer." There was exultation in his voice. If he had any doubts, he kept them well concealed.

"Come on," the girl said. "We haven't a moment to lose."

Dodging Uighur patrols, walking furtively through the darkness, crawling where it was not safe to walk, they reached the seashore. Far out over the dark waters lights were beginning to flash.

"It's coming in," the girl whispered. "We'll wait until it goes back out, then we'll swim out to it. That is how I discovered what it was—by swimming out to it."

The sea monster was coming to shore, the same sea monster that Barr and Rita, and the mayor of the fishing village, had watched from a headland farther up the coast. They watched it again.

The ponderous bulk moved slowly to the shore.

"Come on," Rita said. "We start swimming now. We'll catch it as it goes back to sea."

She slid into the ocean. Barr followed her. They swam silently out into the dark expanse of waters.

CHAPTER IX

NOGO, the Great Presence, was a stern disciplinarian. Every morning at the crack of dawn it was his custom to call his aides and inspect the men under his command. A great part of the military efficiency of the Uighurs was due to these constant inspections. Nothing escaped Nogo's eye.

Nogo was making his morning inspection. He was not in a good humor. In the first place, the regular morning check-up had disclosed that nine of the slaves had died during the night, three of them obviously by suicide. The fact that nine men had died meant nothing to Nogo—he had ordered the death of millions—but he hated to lose workers, especially now that the work of rebuilding the battleship was progressing so well.

And when the regular check-up revealed that one worker was missing and when this missing man was tentatively identified as Bruce Barr, son of the leader of the Council, Nogo almost had a fit.

"Do you call this efficiency?" he shouted. "A man walks out of this camp as if we had no guards. Lieutenant," he snapped to one of his aides, "determine the guard who let this man escape and execute him immediately."

The lieutenant saluted and dashed off on his errand of death. There would be merry hell to pay among the Uighur guards at the barricade. That any man should escape annoyed Nogo. That Bruce Barr should be the man infuriated him. As long as one of the leaders of the Council remained alive, he would rally men against the Uighurs. Barr was was one of the leaders.

At the atomic furnaces Nogo received news that put him in a little better humor. Everything here was progressing splendidly. The work was ahead of

schedule and the supply of steel was adequate. The Great Presence unbent sufficiently to congratulate the inventor who had secured the supply of steel for the Uighurs.

"A very great invention, your sea robot," Nogo said to the inventor, Lasar. Lasar was a squat, powerfully-built Mongol. As a reward for his invention, he had already been made a member of Nogo's personal staff. He glowed at his leader's praise.

"Thank you, Great Presence," Lasar said bowing. "Your Presence had often thought of the great supply of steel in sunken ships resting on the sea bottom. I was fortunate enough to devise a means of recovering it."

"A very clever solution," Nogo said. "A gigantic robot to walk on the bottom of the sea, enduring pressures no diver could stand, a robot strong enough to lift whole ships and to carry them ashore, a robot, moreover, with a mechanical mind to enable it to carry out its task without the need for constant supervision, yes, that was a very clever solution to our problem."

"It was nothing," the inventor said, pretending to be humble. "I merely took the robot pilot our enemies had developed to handle their planes and adapted it to our purpose."

Nogo frowned at that. He did not like to be reminded that the rest of the human race had produced anything the Uighurs found fit to use. Lasar hastily dropped the subject of his sea robot when Nogo frowned.

A few minutes later Nogo's frown turned into a delightful smile. An officer from the radio station came hurrying up. He saluted.

"What is it?" Nogo asked.

"I have a message from Bruton, Great Presence," the radio officer said.

"What does Bruton say?" Nogo eagerly asked.

"He reports" the radio officer was so excited he was panting. "He reports, Great Presence, that his mission has been entirely successful. He was admitted to Council headquarters, he and the men with him succeeded in setting off explosions that caused great damage in the laboratories, and while the stupid council members were trying to bring under control the fires caused by the explosions, Bruton and his comrades succeeded in escaping with the three rocket ships possessed by our enemies. He is now on his way here with the three captured ships!"

"Wonderful!" Nogo said, beaming. "That is the kind of initiative I like to see my men display. I shall promote Bruton to the rank of general as soon as he returns. Three rocket ships captured! The secret laboratories of the Council destroyed by explosions! This is wonderful news."

Nogo beamed. His staff broke into a cheer. From their viewpoint, they had indeed received wonderful news. The secret base of the Council discovered and invaded! The laboratories destroyed. The only three rocket ships the Council possessed captured!

"The war is over!" Nogo announced. "This finishes it. There is no longer any organized opposition to our order. The Uighurs are victorious!"

THE news was quickly spread over the entire camp. From every quarter came fierce shouts of joy from Uighur throats. The long war was over. The Presences had won! Of the mighty winged legions that had flown out of Central Asia, only this handful gathered here on the shores of the Atlantic remained. All the others had died for the cause. Their deaths did not matter. All that mattered was that the Uighurs had emerged triumphant!

Nogo, beaming with joy, was already dreaming of plans for the rebuilding of earth—on Uighur lines. He saw the slow reconstruction of the cities, the repopulation of the farms, the reopening of the mines. He saw millions of people of the inferior races working for the Uighurs. He saw the Presences as a great ruling caste, masters of earth forever.

This was the hour of Nogo's triumph. He, the Great Presence, had planned the Uighur exodus from Central Asia. Now his plans had borne fruit. Now his people were masters over earth, and he was master over them! The dawn of this new day—and already the sky in the east was bright with streaks of light—marked the beginning of Uighur domination of the planet. In the great encampment, fierce shouts of joy rang out. The thousands of ragged, weary slaves looked doubtfully at each other, wondering what was causing so much joy among their masters. Then they learned the source of the joy but they did not join in the shouting. They looked at the ground. Some of them wept.

Suddenly, from the direction of the sea, there came a shrill whistle. A few of the Uighur overseers and some of the slaves looked toward the sound. They had heard this whistle before. It came from the sea robot and it announced that this great monster was coming out of the ocean with another steel ship clutched in its mighty hands.

Gradually the robot emerged from the water. It was holding a ship. Slowly, ponderously, it splashed toward the shore. It started toward the place where the wrecked ships were piled. Then it seemed to become confused. It did not seem to know where to go. It stood there on the beach, mighty legs thrusting deep into the sand, holding the ship it had brought from the ocean depths. It whistled again; a low, mournful sound. The lights on its head went off

and on. It did not deposit the ship in the pile where the vessel was supposed to go.

The Uighur overseer who was in charge of the wrecked hulls, knew that something was wrong with the robot. He was sure that nothing much was the matter but he sent a messenger running to summon Lasar. Probably some minor mechanical difficulty, the overseer thought. Lasar would know how to fix it. Personally the overseer was amazed that the robot had functioned as well as it had.

WHEN the messenger reported to him, Lasar hastily asked Nogo's permission to leave the Presence. "Something is out of order on my robot," Lasar explained. "I am needed to correct it. Do I have your permission to depart?"

"Certainly," Nogo nodded. He was in excellent humor. "We will stroll down to the shore and watch you make the necessary repairs."

The Great Presence and his staff started to walk leisurely toward the beach. Before they reached their destination, they heard a ponderous clanking. In the dawn light they could see a vast bulk moving toward them.

"Is your robot coming ashore?" Nogo demanded, staring at the moving bulk. "I thought it was built so that it would not come farther ashore than the place where the wrecked ships are piled?"

"Something has gone wrong," Lasar hastily said. "I will correct it immediately."

"See that you do!" Nogo sternly commanded.

The inventor ran toward the robot. He carried with him a small radio transmitter. A receiver had been built into the robot and had been tuned to the frequency of Lasar's transmitter. The transmitter had not been designed

to carry voice signals—to build a device into the robot so it would respond to spoken words would have been too difficult even for Lasar—but had been constructed to transmit simple orders such as Stop, Go, Back Up, Turn Around, depending on which transmitting button was punched. These radio impulses, in case of an emergency, controlled the actions of the robot.

Lasar punched the Stop button on his transmitter. When this was done, the robot was supposed to stop.

The robot didn't stop. It kept moving.

"Stop it!" Nogo shouted.

"I'm trying to stop it," Lasar answered. The inventor was sweating. Frantically he punched the buttons on his transmitter. He punched them all. The robot whistled shrilly, lights flashed on its head, indicating the orders were being received, but it kept moving.

Clanking, gears whining, the earth shaking as the mighty metal feet struck the ground, the robot moved along. Suddenly it stopped. Nogo and his staff stared at it, appalled. A sudden silence swept over the Uighur camp. The victorious shouts of exultation were stilled. Even the slaves looked up, wondering what was happening.

The robot was carrying a small ship. Gears screaming in protest at the weight, it lifted the ship above its head. Like a giant hurling a heavy rock, it threw the ship—straight at the atomic furnaces.

The fires of hell seethed in those furnaces. Steel was being melted in their hot interiors. In the atomic vortices that fed heat to the furnaces, inconceivable pressures were held in check.

The ship struck the furnaces and the vortices that fed them. It knocked the furnaces over, smashed the vortices. Little darting streamers of flame, like red-hot devils suddenly released from the

Pit, leaped toward the sky.

BOOM!

The furnaces exploded. Great gouts of molten steel leaped into the air. The earth seemed to hunch itself together, then to spring outward. Debris, dirt, bits of smashed metal, droplets of red-hot steel mushroomed up, up, up into the sky. A roaring volcanic blast of sound tore holes in the air. A thousand thunderstorms were concentrated into a single blast of fury.

IN NEW YORK they heard that explosion, and wondered what had happened. Down to the south, in what had once been Maryland and Virginia, they heard the roar, felt the earth shake. It was heard in New England, in Pennsylvania, in upper New York state.

Most of all it was heard in the great Uighur encampment on the Jersey shore. Uighurs, knocked to the ground by the concussion, found themselves in the midst of falling debris. Part of that debris was red-hot steel.

Nogo and his staff were knocked flat. A great chunk of metal, the top of a furnace, hit the ground with a thud. It did not strike the Great Presence but it got at least half of his staff. Nogo scrambled to his feet. Deafened by the explosion, he stared around him. He saw the robot, rocking from the fury of the explosion, right itself and start ponderously back to sea. It was still whistling. Now there was a note of triumph in its whistle.

"Destroy that thing!" Nogo shouted. "It's gone mad—"

"No, Great Presence," the inventor wildly protested. "If we destroy it, years will be needed to build another. Without it, we can never secure steel from the sea bottom—"

"It has smashed my furnaces," Nogo howled. "Destroy it."

"Something went wrong," Lasar pled.

"Instead of placing the ship where it was supposed to, it made a mistake and set the ship down at the furnaces. It was only a mistake, Great Presence, a mistake. Something went wrong mechanically. It can be corrected. If we destroy the robot, we may never be able to make another one."

The inventor's frantic pleas had their effect on Nogo. He quite clearly realized that without the robot, there would be no steel ships coming from the ocean bottom. Without steel, he would be helpless. Great destruction had resulted from the robot's mistake but the damage could be repaired. New furnaces could be built.

"Then stop it!" Nogo shrieked.

The robot was marching ponderously toward the sea. It was on the beach. Lasar frantically worked the buttons on his transmitter. This time the robot stopped. Whistling questioningly, it stood there on the beach.

"See, it has stopped!" Lasar panted. "It is all right now. It is obeying commands. It can be completely overhauled and repaired."

The robot stood on the beach. There was an air of stupid deliberation about it, as if it were trying to make up its mechanical mind. Frightened technicians were running toward it. There were steel hand holds on the monster's legs. Uighurs were swarming up these ladders.

CHAPTER X

Last Chance for Tomorrow

IN THE heart of the operating mechanism of the robot, Bruce Barr stared out at the destruction he had wrought. With fierce exultation he saw the blast furnaces explode. After that, he had a fight on his hands, trying to

keep the mighty monster from losing its balance. If it fell over, all the king's horses would never set it up again.

In the hours that had passed after they had boarded the robot as it went back to sea he and Rita had disconnected all the automatic controls of the monster, including the radio controls built into the mechanism. The monster, its mechanical brain disconnected, was no longer a robot. It was a gigantic war machine and it obeyed his commands. Hurriedly he operated the levers as it swayed from the blast of the explosion. He fought it back into balance, turned it, started it back to the shore.

Looking outward, he had a perfect view of all the destruction he had caused. The furnaces were gone. Now let the Uighurs re-smelt steel! Let them try! Months would be needed to rebuild those furnaces.

Below him he clearly saw the panic in the camp. This was probably the first time that an Uighur army had gone into a panic. This was the first time one of their own inventions had been used against them. The big cause of the panic was that they didn't know their weapon was being used against them. They thought the robot was out of order. They had no idea that their enemies were secreted in the middle of its complicated machinery.

Barr saw Uighurs fleeing madly. The guards at the barricades were deserting their posts. Confused, they did not know whether to attack the robot or to run. Panic swept through them and they started to run. Panic also swept through the slaves. They had no idea what was happening. All they knew was that hell was walking on earth-shaking feet through the camp. The slaves began to run. The guards at the barricades had deserted their posts. The slaves ran from the encampment. Barr, seeing them go, sighed in vast relief.

On the beach he stopped the robot.

"What are we stopping for?" Rita shouted. She was below him at the ray guns Lasar had had built into the robot in the event it was ever needed as a weapon. "We've got to get out of here. They'll be after us hot and heavy."

"I'm thinking," Barr said. "I've got an idea."

"This is no time to have ideas!" the girl shouted. "This is the time to run. Get this thing submerged before the Uighurs recover their presence of mind."

"No," Barr said.

"What do you mean?"

"While we're here, we might as well do a good job. Come on, Charlie, get into action."

He swung the robot up the beach.

"What are you going to do?" Rita screamed.

"Watch and see!" Barr answered.

He stopped the gigantic monster beside the ships that were piled like cordwood on the beach. "You brought 'em here, Charlie," he said, patting the control levers. "You take 'em away."

Slowly, ponderously, under his guidance, the robot bent, picked up a ship, lifted the vessel into the air, flung it into the Uighur camp. It hit with a thunderous crash, rolled along the ground. Everything that was in its way fell before it. It rolled half way across the camp.

"Get another one, Charlie!" Barr yelled. The robot bent to pick up another ship.

"There are Uighurs on the ladders coming up the legs!" Rita suddenly screamed.

"Ray 'em off," Barr answered. He heard the thrummm of the ray beams as she went into action.

"Get 'em Charlie!" he was yelling at the top of his voice. "Give 'em hell!" Years of suppressed hate were in that

yell. All his life the Uighurs had been enemies. They had killed and enslaved his people, they had driven him and his kind underground, they had ruined a world. Now, in some slight measure at least, was the hour of vengeance.

Like a giant smashing a collection of doll houses, the robot hurled vessels into the Uighur encampment. Barracks, laboratories, furnaces, the battleship that was being rebuilt, felt the shattering blows.

Below him on the beach, Barr suddenly glimpsed a Uighur that he recognized. Nogo!

"Get this one for me, Charlie!" he said grimly. "No, don't throw a ship at him. Get him like this!"

THE gigantic mechanism moved sluggishly forward. Too late, Nogo sensed its intention. Nogo still had no clear idea of what was happening. He still thought the robot had gone mad. But mad or not, he perceived what it was trying to do.

He tried to run. It came after him. He screamed and tried to run faster. It followed him. He looked back. It was coming closer. It was almost upon him. He screamed again, looking over his shoulder, and tried to dodge to one side.

He slipped and fell.

Delicately the robot put one ponderous foot on his squirming form, brought its weight down. Nogo's screams went into sudden silence. Hundreds of tons of weight were pressing him into the ground. The foot pressed and pressed and pressed.

Barr sent the mighty mechanism back and forth through the Uighur encampment. Everything that tried to run, it stepped on. Frantic Uighurs tried to man their weapons, tried to bring anti-aircraft beams into action. They

might have succeeded. At the edges of the camp Barr saw why they would fail.

The slaves were coming back. They had run. They still did not know what was happening. But they were coming back. They were fighting hand to hand with Uighur gun crews. They were using clubs and axes and crowbars. They were using their teeth and their fingernails. When they overpowered a gun crew, they took charge of the weapon and turned it on the Uighurs.

They had been slaves. They were tasting the pleasure of revolt.

Barr saw a grim gaunt figure stalking ahead of them. Burke! It was the old flier who had rallied the slaves and brought them back. Now the slaves were exacting payment for the torture they had undergone. And among them and through them and around them, as they fought, a giant of steel stalked, helping them.

"Rita!" Barr shouted huskily. "Girl! Do you realize we've won this fight?"

"We've never won as long as Nogo lives," she answered.

He told her what had happened to Nogo. "We've won!" I tell you. "We've blasted them out of existence.—"

Suddenly his eyes narrowed. Three dots had suddenly appeared in the sky. He saw at a glance that they were rocket ships. His heart leaped at the sight.

"Ships from the Council!" he shouted. "They've come to help us."

An instant later he knew that this was not correct. The Council had no way of knowing what had happened here. They could not have sent ships. But ships were coming!

It could only mean one thing. Too well he remembered what Bruton had planned to do. Bruton had succeeded. He had captured the ships of the Council, and returning to the Uighur encampment, had discovered what was going on.

The three ships were diving at them.

"Ray guns, Rita!" he shouted. "If those ships get to us—"

Too well he knew the power in those speedy fliers. The three ships were diving at them. They were coming fast. Like streaks of light. Flashes were leaping from the guns in their noses.

THE ray guns thrummed. One darting flier, struck, lanced upward out of control. The other two kept coming. Barr felt the robot lurch as those deadly beams struck home. Simultaneously the two ships dived at him. Rita's guns struck out again. There was only one ship coming now. She had got the second one. But the third one was upon them.

"Get him, Charlie," Barr whispered, a prayer in his voice. "Get him—"

The ship screamed in a power dive. Bruton, piloting it, had seen what had happened to the Uighur encampment. He had gone berserk. He was going to commit suicide by ramming his flier through the robot.

Ponderously the gigantic arm swung through space. The steel fingers were open. There was a tremendous crash. Bruton never knew what hit him. The steel fingers seized the rocket ship, crushed it, hurled it away.

The robot whistled questioningly. "Did I get him?" it seemed to say. "Did I get him?"

"Charlie," Barr whispered. "You got him." He brought the robot to a halt.

AS HE and Rita went down the ladder on one of the great legs, he could see hundreds of slaves running to greet them. Slaves no longer. Free men now. Their shouting filled the morning.

In the east the sun was above the horizon. It was bright with the promise of a new day that was dawning over America, over the world.

« « SCIENTIFIC ODDITIES » »

By LYNN STANDISH

HOTTER THAN HADES

IN THE laboratories of the National Bureau of Standards, samples of what the interiors of the hottest stars may be like are produced.

By suddenly discharging 40,000 kilowatts of electrical energy through a quartz tube with one-tenth inch bore, a spark was obtained lasting only five millionths of a second, but nearly fifty times as bright as the sun, and having a temperature of 45,000 degrees Fahrenheit.

These studies are expected to result in new understanding of the properties of matter at extreme temperatures.

* * *

MANGANESE FOR TOMATOES

"DO HAVE a little manganese in your morning juice." But manganese is the chemical element used to toughen steel, you say. So it is, but now it has been shown that it is also necessary for the proper proportion of vitamin C (ascorbic acid) in tomato juice.

Dr. Jackson B. Hester, agricultural chemist for the Campbell Soup Company, tells of this discovery that tomatoes raised on soils low in manganese are low in this necessary food element while tomatoes raised on high-manganese soils have plenty of vitamin C.

Dr. Hester, in a pot culture experiment, found that the addition of one part of manganese sulfate to 15,000 parts of one type of soil almost doubled the vitamin C content of tomatoes grown in it.

Although a certain minimum of manganese has been proved necessary, too much of it is known to be poisonous to plants, therefore, it is now necessary to find out how much of the element it is safe to apply to any given tomato field.

* * *

FISH THAT TALK

WE'VE all heard of and many of us have actually seen flying fish, but what about *talking* fish?

According to scientists of the United States Fish and Wildlife Service, fish have no vocal cords, but many species are still able to make sounds, ranging from grunts and barks to actual musical notes.

Most musical of American fishes is one known as the singingfish. It produces a humming sound by vibrating its air bladder. This species, also known as the midshipman, lives in the Gulf of Mexico and in the Pacific Ocean.

Warm-water fishes in European seas are also said to produce musical tones. This may be the

foundation for the classic myth of the siren's song. However, most of our "talking" fish are not musical. Grunting and drumming sounds are most common. The fish called "grunt" and "drum" got their names from the respective sounds. The pigfish or porkfish is another that got its name from its grunt. Still another is the croaker, so-named from its voice which is said to be the loudest of all our native fishes. The Conger eel produces a "barking" sound.

The majority of the "talking" fishes produce their "voices" by vibrating their air bladders, either by the rapid tugs of attached muscles, or by sliding muscles over the tightened membrane. Some fishes, however, make sounds by grating their teeth or rasping with their gill-covers.

"Did you ever see an elephant fly?"

"No, but I heard a fish talk."

* * *

ODORLESS PAINT

THE American-Marietta Company, Chicago, Ill., has put on the market a paint without any odor for use in stores, institutions, schools, etc., where the smell of paint being applied in one section of the building affects the health or efficiency of occupants in other parts of the building. The paint is not perfumed, but the odor has been removed and this enables it to be applied in either the winter or summer without any ill-effects since the windows can be kept closed while the painting takes place. Moreover, the paint sets in only three hours and the surface is completely dry in from 12 to 15 hours.

* * *

BIRTHPLACE OF TREE FROG

ONE of the most interesting of all the 20,000 reptiles and amphibians recently brought to the Smithsonian Institute by Dr. Hobart M. Smith after his expedition was a little tree frog.

Little tree frogs are hatched in a nest provided by nature in certain tropical trees. The nest used by the female frog is a plant that belongs to the pineapple family and looks very much like the top of a pineapple. The plant grows on the limbs of tropical trees and during the rainy season, the raindrops fall into the plant and are held by the leaf bases. The continued rains always keep the plant filled with water during this rainy season. As soon as the plants are full of water, the female frog lays her eggs in this "nest." The eggs soon hatch into tiny tadpoles which develop into frogs before the rainy season is ended. When the dry season comes, the frogs are hardy enough to leave their birthplace and start their life in the trees with their parents.

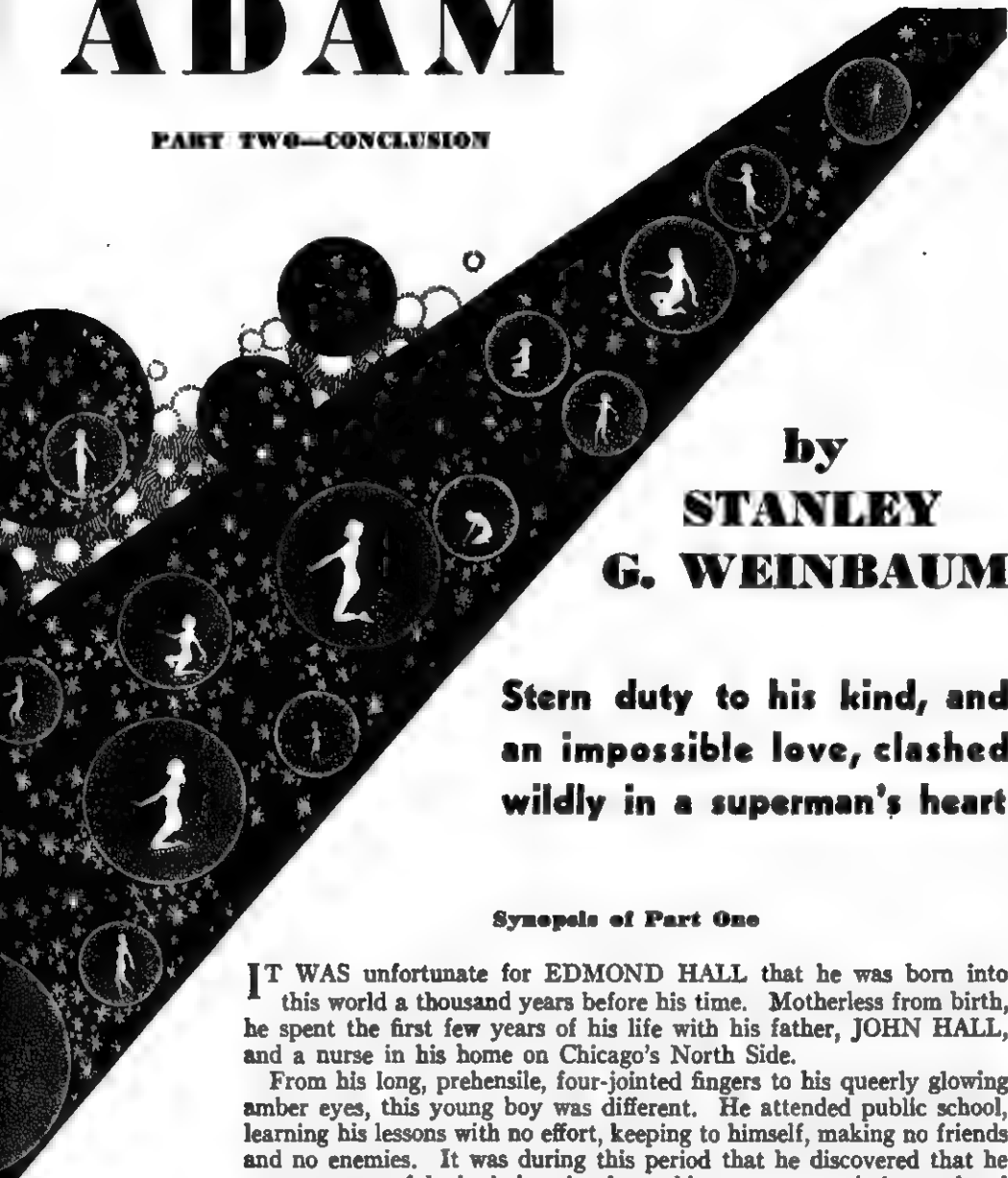
THE NEW

Sarah was a woman—but not like the women of all the ages that went before her. She was the future's woman



ADAM

PART TWO—CONCLUSION



by
**STANLEY
G. WEINBAUM**

**Stern duty to his kind, and
an impossible love, clashed
wildly in a superman's heart**

Synopsis of Part One

IT WAS unfortunate for EDMOND HALL that he was born into this world a thousand years before his time. Motherless from birth, he spent the first few years of his life with his father, JOHN HALL, and a nurse in his home on Chicago's North Side.

From his long, prehensile, four-jointed fingers to his queerly glowing amber eyes, this young boy was different. He attended public school, learning his lessons with no effort, keeping to himself, making no friends and no enemies. It was during this period that he discovered that he was possessor of dual minds—that he could pursue two entirely unrelated subjects simultaneously and without confusion.

While in sixth grade, he met a boy and a girl who were to affect, vitally, his entire life. The boy, PAUL VARNEY, the son of a university professor, was a handsome, hot-headed youngster who disliked Edmond from the moment they met. The girl, EVANNE MARTEN, seemed attracted to Edmond, and sided with him when Paul tormented him.

While Edmond was in his second year at Northwestern University, his father died, leaving him an income sufficient for comfort. Edmond withdrew even more deeply within himself, now, spending most of his time stocking his amazing dual minds with a compendium of all human

knowledge. His research led him to the discovery of a principle by which he could have ruled—or destroyed—the world. Desiring no such powers, he used his discovery to fashion a radio tube far superior to any previously known, and became wealthy by selling his invention to a manufacturer.

During one of his lonely walks about the city, he came upon a small painting—a landscape in oils—on display in a small shop. Attracted to the picture for some unaccountable reason, he purchased it, learning it had been painted by SARAH MADDOX—an entirely unfamiliar name.

During the years following his grammar school days, Edmond had rare glimpses of Evanne Marten, who moved gaily within a wide circle of friends and acquaintances. Paul Varney was now deeply in love with her and they were often together.

Now Edmond, having exhausted his study of the sciences, decides to turn to the study of Man. He engages Paul, who is eking out a living by writing, to show him the places where people gather to seek entertainment. While attending a night club, they meet Evanne with a party of friends. Later Edmond arranges a dinner engagement with Evanne, and despite Paul's objections, she goes through with it.

Afterward, at her home, Edmond takes complete charge of her will through the power of his own mind; and at his order, she performs an exotic dance for him. Moved by her evident emotion, he offers her the justification of love; and then, in what he believes to be in the nature of an experiment, asks her to marry him.

She stirs in his arms, looking up at him with tear-bright and serious eyes, and gives her answer.

"I have said I loved you, Edmond. I will marry you any time! Now, if you wish it!"

(Now go on with the story)

CHAPTER XVII

FRUITION

THE thrilling drabness of a Crown Point wedding was over; since morning Vanny had been a wife, and it was now mid-afternoon! She was alone

for the first few moments since the epochal events of the morning. Edmond had given her his car to drive to her apartment for such necessary packing as she had to do—things she would need in the house on Kenmore.

She ordered her trunk up from the cellar locker-room, and placed her key in the apartment lock with a queer sad little puckering of her lips. Things moved so swiftly! Who could have dreamed it two nights ago—or even last evening? How had Paul taken her scribbled note? Had he told the rest of the bunch? What had they said and thought—especially Walter, who used to call her Vanny the Invulnerable? Invulnerable! The joke was on Walter, and herself, too! How had it all happened, anyway?

"I don't care," she thought, as she entered the living room. "I just fell hard for him, and that's that!"

Eblis bounded in with a protesting squall; she had forgotten to feed him in the rush of the morning's events. She rectified the omission, and passed into her bedroom. There she paused at the sight of the wine-velvet dress draped over the foot of the bed, beside the black hose and the diminutive black silk dansette she had worn; an embarrassed recollection colored her throat.

"I don't care," she told herself again, picking up the lingerie. "I'm glad I wore it." She spread it against her, standing before the door-mirror, and turned a little pirouette. Black stockings must have looked somewhat less sensual, she thought, but there wasn't very much of the dansette. She tucked up her skirt, surveying her legs critically. Long, soft, rounded, nice!

"I'm glad!" she repeated. "I'm glad he liked the way I looked—glad he was man and I woman enough to thrill! And that I'm honest enough to be glad! In fact," she told her reflection, "I'm a

complete Pollyanna, and what of it?"

She folded the garment, placed it on the bed, and proceeded to bury it with others from various closets and drawers. The janitor struggled in with a flat steamer trunk, and she transferred the bed's burden to its hollow. She followed with an old hand-mirror of her grandmother's, a manicure set that was a graduation gift, a few other mementoes. For a moment or two she hesitated over a framed picture of Paul, finally laying it on the dresser. "If there's room," she thought.

THE doorbell rang; she ran to answer.

"Oh—Walter!"

"H'lo, Vanny." He stood polishing his glasses. "Mind if I come in?" He entered. "Congratulations—or is it best wishes? I never remember which to offer the bride."

"I'll take a little of both," said Vanny. "You don't seem very enthused."

"Oh, I really am!" He paused again. "Only Paul, you know—"

"What about Paul?" she was a little anxious.

"Well, he asked me to see you. He got your note, and I guess it pretty well upset him."

"I should have been more tactful, I suppose," said Vanny, "but I didn't exactly know how."

"You certainly didn't! He came over this morning before I was up, and in such a state! 'You wormed yourself into this situation,' he said. 'You're Vanny's confidential agent! Now you see her for me!' then he told me about your note, and he said, 'She even signed herself *Evanne*. To me!'"

"I didn't mean to do that," said Vanny. "I was rushed and excited."

"Well," said Walter, obviously ill at ease, and with a plunge-into-cold-water

expression, "the upshot of his remarks is this: He thinks you married Edmond Hall because of your quarrel with him."

"Oh, that's utterly ridiculous!"

"Well, I'm just telling you. He said, 'You find out if it's true. I can't go around myself, and I can't write or call up, but you find out and if it's true, tell her we'll fix it somehow. Tell her not to worry, and we'll get her out of it!'"

"You tell Paul he's insulting!"

"Now listen, young lady," said Walter, "I can see Paul's side of it. You know the whole crowd sort of considered you two paired, otherwise there'd have been a few others on your trail. I might have had a try myself. And you did show a pretty sudden reversal of form."

"Paul and I were never engaged."

"He seemed to feel differently."

"Maybe I did encourage him some," admitted Vanny. "I liked him immensely and—was wrong, I guess. I'm sorry."

"If I'm not presuming," said Walter, "just why did you marry Edmond Hall?"

"Because I love him!"

"You kept it well concealed."

"I didn't know until last night! Besides, I'm not on cross examination, and I resent being questioned!"

Walter turned soothing. "No offense, my dear. I'll sing your requiem to the crowd." He turned toward the door.

Vanny relented. "Walter, you and Paul—both of you—must come to see me when we get back. Paul knows where."

"Oh, are you going somewhere?"

Vanny was a bit flustered. "Why, I suppose so—if Edmond wants to. We hadn't discussed it."

"If Edmond wants to! He certainly toned you down in a hurry! I wouldn't have believed it possible!"

"He's wonderful!"

"He must be. Good-bye, Vanny—The crowd'll be less of a riot without you!"

Men called for her trunk. She hurried a few last-minute articles into it, watched it closed, strapped, and borne away. She picked up the reluctant Eblis, and descended to her car, leaving Paul's forgotten picture still lying face downward on the commode.

CHAPTER XVIII

Olympian Love

EDMOND was sitting in his laboratory when Vanny returned, and she ran up the stairs radiant and flushed and a trifle heated from her exertions. She stopped in the doorway. Her newly acquired mate sat on a board bench peering into a spinning bowl filled with bright liquid. She tiptoed forward to peek over his shoulder, and glimpsed a distorted reflection of her own face.

Edmond turned, and she thrilled again to his glance of admiration. He drew her to the bench beside him. "You are very beautiful, dear."

"I am glad if you think so."

For some time they sat silent, Vanny content in her lover's arms, and Edmond turning various thoughts in the intricacies of his minds. "I strike closer to the secret of happiness," he reflected. "The pursuit of happiness through sensation, which is but the search for beauty, is the pleasantest and most promising of the ways I have followed. And this being whom tradition will term my mate is in all ways the most aesthetic, the most desirable means to my end."

Vanny twisted in his arms, to look up at him. "Walter Nussman came in while I was packing."

"Indeed. With a message from Paul, doubtless."

"Why, yes," the girl said. "The whole crowd was thoroughly surprised by the suddenness of the affair. In fact"—she smiled—"I was myself! Not that I'm sorry, dear—but I just don't understand yet."

"And that," said Edmond, "is hardly surprising."

"Were you as amazed as I was?"

"Not I." He had nothing to lose by frankness; the prey was trapped and caged. "I tricked you into it."

"You mean you fibbed a little," laughed Vanny. "Men always do to girls—especially men in love."

"I never lie," replied Edmond, "having never found the need. I planned your love beforehand. I took you at your weakest—at the Venice, when your resistance was negligible. I trapped you again last night—sated you sleepy with food, lulled you with words until you were prey to any suggestion of a stronger will, and then placed you in such a position that your own modesty, your own training, your own self-respect, forced you to admit you loved me. You could not have resisted; the experiment was too well designed."

HE paused, noting the effect of his words. A trace of horror, a trace of hurt reproach, showed in his companion's face, but not the violent emotion he had half anticipated.

"Edmond! An experiment! You talk as if I were no more to you than these things around us!" She indicated the array of cages and instruments with a contemptuous gesture, watching for his answer.

"But you do mean more, dear! You are my symbol of beauty and my final bid for happiness. Hereafter these other interests shall be—diversions."

Edmond was satisfied. His bird was well trapped and tamed, and did not even comprehend the method of her

taking. "And thus," he reflected, "ends the experiment's inception and begins its consummation. Now if I am indeed his prototype, let us explore the meaning of love to the superman."

Vanny rested content against him; she thought nothing of his confession, he realized, because the thing was done to win her; it justified itself because she was the desired object. He drew her close again, caressing her body with his long fingers. His twin minds reveled in an unaccustomed riot of sensation, and forgot for the time to be properly analytical. He raised the vibrant form in his arms and carried her to that room where stolid Anna had borne him.

The girl tensed in his embrace. "Edmond! There is someone else in the room!"

She had somehow sensed his duality. "There is no other, dear. You tremble at shadows." He soothed her, drowning her senses in a flood of passion; her breath blew against him in fluttering gasps. "Cheyne-Stokes breathing," he noted, and then forgot method and analysis as his twin minds fused in a riot of ecstasy; Vanny was murmuring, and for a moment a paen sang in his ears.

Then he lay panting, drawn and exhausted, in the silence of diminishing sobs; his fingers clenched into curious fists.

"The superman!" he jeered. "Nietzsche—Nietzsche and Gobineau! Was it your shades that gibbered around my nuptial couch?"

CHAPTER XIX

A Honeymoon of Dream

EDMOND awoke with an unaccustomed weariness and a heaviness in his limbs. A weakening lassitude sat upon him, and a somber sense of futility. "It is a truism," he reflected,

"that pleasure is won at the expense of pain. The accounts of the cosmos balance, and for each thing that is granted, payment is exacted even to the last place of the decimal." And in his other mind: "To this extent at least I am human, in that my desires still exceed my abilities."

But Vanny arose radiant; she went humming about the house, presented herself to the stolid Magda in the kitchen, and felt only passing regret at the defection of Eblis. For the great cat had liked neither the house nor its master, and had quietly departed during the night without a leave-taking, vanishing mysteriously as is the custom of his kind.

Vanny explored her new demesne; she found much to admire in the old furnishings, and some items which she promised herself to change. The gloomy library with its skull-topped fire-place depressed her; some effluvium from the ancient volumes seemed to keep the place in deeper shadow than natural. She looked into several books; they did not interest her and she returned to the upper floor to proceed with her unpacking, to find Edmond risen and vanished, doubtless to his laboratory. She was happy; Paul, Walter, and her friends had disappeared from her memory almost from the moment of her encounter with Edmond, just three evenings before. It was as if she had been suddenly reborn in another character.

Descending to arrange a late breakfast, she found her new husband reading in the library. He had had a fire laid in the grate to relieve the brisk autumnal chill, and sat idly smoking, turning the pages of a gray volume, as if glancing aimlessly through it. Vanny watched him for a moment beyond the arch of the doorway; she saw something romantically mediaeval in the faint flicker of the firelight on his pallid in-

telligent features. "Like a student in ancient times," she thought, and skipped in to perch beside him on the massive chair. He placed his arm around her, and she peered over his head at the text he held. Hen-scratches! "What's that you're reading, dear?"

Edmond translated the page before "The only surviving volume of the work of Al Golach ibn Jinnee, my dear. Does the name mean anything to you?"

"Less than nothing!"

"He was an apostate monk, turned Moslem. His work is utterly forgotten; no one save me has read these pages for nearly five centuries."

"Ooh! What's it about?"

Edmond translated the page before him; Vanny listened almost incredulously. "Gibberish," was her first thought, but an eerie shudder made her tremble. Little of the mad blasphemy was clear to her, yet there was an aura of horror cast about her by the words.

"Edmond! Stop!"

HE PATTED her hand, and she departed for Magda's kitchen, but she perceived a curious illusion; a gigantic shadow followed her just out of direct vision—a shape horribly winged and formless, yet never quite visible; it danced along almost behind her, and persisted for several minutes in the sunny kitchen. There finally she threw off her sense of depression in the matter-of-fact association of Magda, checking supplies of staples, planning menus for the following day.

After a late breakfast, they returned again to the library. Edmond sat in his usual place before Homo's skull, and Vanny on the foot-stool at his feet. She watched the play of shadow on the little oil landscape.

"Edmond, I don't like that picture."

"I'll have it moved to the laboratory, dear." He had long since ceased to

speculate concerning the daub.

"And Edmond, dear—"

He smiled at her.

"Shall we go somewhere for a while? Not, of course, unless you want, but I *should* like to have a little time to adjust myself—to get straightened out. Things happen so quickly."

"Surely, Vanny. I understand. Wherever you choose."

Vanny was never certain thereafter whether they actually traveled, and, far from adjusting herself to her altered living, reality seemed to be slipping away from her like melting ice in her fingers. The journey, if journey it was, seemed too incredible, though parts of it had color and solidity. There was a day and a night in New Orleans—she remembered the startling expanse of Canal Street—when she was deliriously happy in Edmond's love, and other periods when they were suddenly in the house on Kenmore, dream-like, without transition. But at other times she recalled visits to places and cities that she was sure had no counterpart in reality. They wandered apparently for many days through an unnatural bloody-hued desert, subsisting on the contents of a water-skin Edmond carried, and the meat of strange little fungoid things that bobbed about in the air like potatoes in water. And they wore heavy furs, and were bitterly cold by night; even the day brought only a wan half-sunlight, and the sun seemed small as a dinner plate. And once they stood very still while a great thing only slightly like the little airy mushrooms droned overhead; it was too high above them to see clearly, but it buzzed along with a purposeful tenacity toward some unguessable objective.

AT ANOTHER time they stood bathed in muggy clouds on a low hill, watching the misty lights of a curi-

ous city below them. Edmond whispered warnings to her; something evil was abroad in the city, and she gripped a six-inch dart in her hand. She never remembered the outcome of this adventure, but she retained the impression of terrific destructive power in the tiny dart, and a vague supposition that it was a little rocket of some sort.

And there were many nights in the house on Kenmore when Edmond reclined in his chair and she danced for him, danced with no thought of modesty now, but with a wild sense of grace and pleasure; the fire behind her limned her body in charcoal-like silhouette, and her strange mate watched her with an admiration that she would almost have died to create. The eyeless gaze of Homo's small skull seemed to her to follow her movements, and the musty volumes on the wall-shelves breathed an incense.

But reality was dropping away. The very solid walls of the house were growing unstable; they wavered and shifted like stage-settings when her glance was not directly on them; the sturdy oak doorways went misty as she passed, and chairs were never quite where she expected when she sat down. Even the familiar street beyond the windows took on a smoky appearance, and she could not read for the shadows that stole out of corners. This dream honeymoon was befogging her tense little mind; reality and fancy were becoming confused and inseparable. The solid material of every-day life grew shadowy, while the shadows in the corner took on a terrifying solidity.

Edmond watched the progress of Vanny's unsettlement with an interest not altogether academic or unsympathetic; his experiment was striking emotional chords he had not known he possessed. And he himself was not wholly unscathed; his languor

strengthened about him like a misty net; nor was he unaware of the reason. His keen analysis of situation had instantly developed the x-quantity in the experiment.

"We are alien beings, Vanny and I," he concluded. "She is not mentally capable of sustaining our intimacy, nor I physically. Ours is the mating of the eagle and the doe; each is in its own sphere a competent entity, but the eagle's beak is too sharp for the doe's lips, and the doe somewhat too sturdy for the avian physique." He twisted his saturnine features in a smile. "Yet there are certain compensations."

BUT a culmination impended, and arrived with an uncompromising finality. Vanny collapsed first under the strain of the unnatural union. Edmond entered the arch of the library one day to find her lying senseless before the fire-place in a limp heap of iridescence, with the flames almost licking at her robe, and a reddening bruise between her eyes. He bore her to his chair and used what means he had to restore her; for several minutes thereafter she seemed dazed, and clung fearfully to him.

"It came out of the wall," she murmured. "It came out on ragged wings."

"The fire has vitiated the air here," said Edmond. "You were overcome, and struck your head on the mantel."

"No! I saw it, Edmond! It flew out at me!"

"You fainted and struck your head," Edmond repeated. He drew the girl erect, led her up the stairs.

"I saw it! I saw it!" she was murmuring. "It came out on ragged wings, with eyes that bit—"

He supported her to her bed, easing her gently down. He placed long fingers on her forehead, and held her

eyes with a gaze grown suddenly intense.

"There were no shadows, dear," he said. "There will be no shadows hereafter. You are to sleep now. You are very sleepy, dear."

Vanny obediently slept. Edmond watched her for a moment and then left her with slow thoughtful steps. He felt again the surge of unaccustomed pity; she was too beautiful to be thus tormented.

"I must not destroy her!" he thought in his complex minds, and repeated almost fiercely: "I must not destroy her!"

CHAPTER XX

Old Eve

IT WAS several days before Vanny felt quite herself again; she wandered about the house in her purple robe with a bemused air, but the shadows remained quiescent in their corners, and chairs and walls were properly inert. Edmond was pleasantly considerate, and spent much of his afternoons amusing her with dagger-like comment, description, or fancy, but there were no more visions. In the main, he held the conversation to commonplace topics and routine affairs. He had casually liquidated the bonds which had supplied her modest income, and purchased a variety of stocks for her. The two months of their union had witnessed a considerable appreciation of these, and he brought her a sheaf of certificates to endorse. He was going to sell them, he told her, as she reclined on her bed.

"Fools are patting fools on the back," he said. "The rise will not outlast the month."

He saw that the considerable profit cheered her; Vanny had never been

close to poverty, but had likewise never hitherto known the carefree sensation of affluence. She was familiar with the argot of the Street; Walter and others brought the talk of the rampant market to the old gatherings.

"Why don't you sell short, dear? Wouldn't it be wise?"

"Very wise. The balloon is inflated to the bursting point. However, your profit, and mine as well, is considerable even in this year and this city. More would be burdensome, and involve a routine of management I prefer not to shoulder."

Her confidence was complete; she did not question him further.

After a day or two she was up and about as usual; except for a dawning sense of distance in her black eyes, she was quite the Vanny of old, laughing again at the little incidents of living, happy again merely because it was easy to be happy. October was slipping quietly along with its unexpectedly early evenings; she had been alone with Edmond for eight weeks and had not yet missed her old companions.

Edmond, after her recovery, had fallen into his old routine. He spent his mornings in town casually taking care of the details of living, and his afternoons mostly in his laboratory or the library. She grew accustomed to his habitual comings and goings, and adjusted the machinery of house-keeping to them, though Magda, of course, bore most of this burden with the methodical efficiency of two decades of service.

But as the month closed, she was not always happy. Edmond had changed. He was kind enough, thoughtful enough, but the old wild nights of flame were no more. There was some barrier between them, something of his building that kept them apart as if in separate cells. Had he

ceased to love her? Was her bright body already growing stale to his senses?

SHE worried a little as the days dropped one by one into the past; perhaps she herself was at fault somewhere—but in what respect? She was utterly at a loss, and thought wistfully of the nights that already seemed long ago.

She offered her body as a lure. She used it in ways of which she could not have dreamed in the days past; she danced for Edmond like a votary before her deity, improvising a costume of the half-transparent robe. And all her reward was an almost reluctant admiration, for she perceived that he was not entirely unmoved. The prey rose often to the bait, but would not strike.

And so October dragged into its final week. The days shortened, there were new songs on the radio, and the tottering market crashed with a world-wide rumble that she scarcely heard. She was puzzled and hurt by Edmond's indifference; the word "experiment" popped out of memory to harass her.

There entered another element, equally puzzling in their relationship—she began to perceive the strangeness of her husband's character. There was a difference between Edmond and other men, a subtle something that she could neither express nor identify. This was less to be worried about than his coldness, for it seemed to her proper that he should be a being above others; if this superiority involved certain physical differences in eyes and hands—well, that was as it was. At times, indeed, she was startled by stranger differences, curious inhuman distinctions in his very thoughts. She sensed these things occasionally even in casual conversation, and sometimes in rather ter-

rifying manner. One night when she danced for him she became suddenly positive that two people stared at her; she sensed another presence that watched her with desirous eyes. She stopped momentarily to gaze startled at Edmond; it was for that instant as if four eyes stared at her from his lean face. Thereafter the thing recurred with unsettling frequency, and she began to imagine thoughts and presences of peculiarly disturbing nature behind Edmond's pale eyes. November was dawning on a puzzled, wistful, more-than-half-frightened bride, in whose nature an ancient Eve was struggling newly awakened and demanding sustenance.

CHAPTER XXI

Old Eve Rebels

EDMOND was not unaware of Vanny's predicament. From his sympathy and knowledge he knew, almost to the wording of her thoughts. However, for perhaps the first time in his life he found himself helpless to solve a problem he might have attempted. Continue the deadly intimacy of their first few weeks? He foresaw disaster to both of them. Explain his position to her? Impossible, since he himself was not cognizant of it. Send her away? A cruelty as burning as that he was now perpetrating. He was surprised by the intensity of the love which he himself had evoked in this being who was his wife.

"I played Eros too well," he reflected. "My arrows wounded too deeply." And his other consciousness repeated its old admonition: "The fault is neither hers nor mine, but lies in this union unnatural to both of us. Too close an intimacy will end by killing me and driving Vanny mad. Our separate strengths

attack each the other's weakness; we are acid and alkali which are mutually destructive even to complete neutralization. Neither of us can sustain the other."

So he followed his policy of procrastination, confident that in time elements would enter that might make possible a solution. The situation presented a deadlock; only a disturbing force could upset the balance to permit his intellect to play. He had no presentiment as he left on his customary morning's visit to town that this force was about to emerge. He diverted himself by reasoning out certain trends he pre-visualized in the world of finance.

"The system has passed a climax," he thought. "Of the several rational methods to rebuild the structure of prosperity I see none likely of adoption save that of a population-devouring war. The little minds are too well in control of things, though doubtless they will muddle through as in the past. This is a rather hospitable planet, and provides a large margin of safety for the errors of its inhabitants. Likely enough in the next several years some new industry will rescue the phantom called prosperity, which was aided by the automobile and abetted by mass credit."

VANNY felt a surge of real pleasure as she greeted Paul, who entered looking rather woebegone, with his yellow hair in greater disarray than usual.

"Oh, Paul! I'm glad you came."

Paul was somewhat ill at ease, and too buried in his own unhappiness to look directly at Vanny. She led him into the living room, sat facing him on the davenport.

"Tell me about yourself, Honey."

Paul shrugged. "I starve on."

"I'm sorry." Vanny felt his aversion to pity; she turned to another subject. "What's happened to Walter?"

"Walter's nearly nutty! He was in the market—cleaned out last Thursday."

Vanny felt a thrill of pride. "Edmond sold out both of us ten days ago. He told me what was coming. He says it's not over yet."

"Then he's Babson, or the Devil!" He looked sharply at Vanny, his attention drawn by her sudden start. For the first time he noted the distant look behind her dark eyes. "What's the matter, Vanny?"

"Why, nothing, silly! What should be?"

"You look different. Not so sparkling—more serious."

"I was sick a few days, Honey. Nothing important."

"He treats you all right?"

"You're being ridiculous!"

"Are you happy, Vanny?" he insisted. "You've changed so!"

The girl looked at him, a trace of speculation in her eyes. She was surprised to discover that her trouble was plain in her face—or was it simply that Paul loved her, shared her feelings? She felt a rush of compassion; surely she had treated him shabbily enough! This was Paul, her Paul, who loved her, and whom she had casually and cruelly kicked aside. She reached out her hand, ran her fingers through his yellow hair. With the gesture, Vanny felt a strange stirring within her; her body was aching for the love her mate withheld. She drew back her hand, closing her eyes with the intensity of her aroused desire. Paul was leaning toward her, watching her.

"What is the matter, Vanny?"

The question recalled her.

"Nothing. I guess I'm still a little under the weather."

"Listen to me a minute, Vanny. I'm not welshing on the deal. I've lost you, and that's that. But you do see I was

right in refusing to bring him around, don't you? I wanted you, and I had to fight. You see that."

"Yes, Paul. You were right."

"I was angry, bitterly hurt, Vanny. I thought it was a scurvy trick of yours to toss me aside so—well, so carelessly. I thought that at least I was entitled to a warning, a chance to plead my case." He paused. "Now—I don't know. You've changed. I hardly recognize you as the same Vanny. Perhaps you acted in the only way you could."

"I did, Honey. Believe me, I did not try to hurt you."

"It's all right; what's the difference now? But it was an awful wrench at first, with the feel of your lips still poignant. Your kisses haunted me for days."

"You may kiss me now, Paul."

He smiled wryly. "No thanks, dear. I know these married kisses with the fire carefully smothered. About as much kick as an extinct cigarette."

VANNY pursued the discussion no further in that direction; she smothered an unexpected impulse to insist, to repeat her offer, and returned to casual topics. For an hour the two sat talking; their old intimacy, the easy frankness of their long friendship, blanketed them, and Vanny was aware of a decided enjoyment. Paul was so solid, so real! He who thought himself a poet, an aesthetic spirit, and lover of beauty—how simple he was after all, how simple and human and understandable! No wizard here to evoke dreams and practice demiurgy and summon terrible and not-to-be-understood shadows out of corners! Just Paul, plain and lovable.

"But he's not Edmond!" she thought. "He's not Edmond. I master Paul too easily—he's a sweet, normal, intelligent youth and he loves me, but he's not the

flaming, dominating sorcerer I happen to love!" And again, while Paul talked of something—she scarcely knew what: "But oh God! I wish Edmond loved in the same way as Paul!"

And an hour passed. As noon approached, the press of household duties made themselves felt; she could hear old Magda clattering in the kitchen. Paul, she recalled with a smile, never had any conception of the exigencies of time; she'd have to remind him.

"It's near lunch-time, Honey. I'd ask you to stay, only I wasn't expecting you, and there's hardly enough for you and me and Edmond." She hesitated to voice her actual doubts as to the advisability of his encountering Edmond—not that she mistrusted Edmond's finesse, but she was skeptical of Paul's delicacy in such a situation. However, Paul himself realized the conditions.

"Thanks," he said wryly. "I'd be uncomfortable anyhow, under the circumstances."

He rose to depart; Vanny followed him to the door with a curious reluctance, for he seemed to take with him a sense, a memory, of the old care-free days. Not that she regretted their passing, for she knew that she was Edmond's, flesh and spirit, utterly, for so long as he demanded; but the past too had its charms.

"Paul, Honey!"

He paused at the door.

"You'll come back soon, won't you?"

"Of course, Vanny. As often as you'll permit—tomorrow if I may."

"Not tomorrow." It *would* be pleasant, she thought. "Come Wednesday morning, then."

He was gone. Vanny watched him for a moment through the glass of the front door, watched with a reflective smile that was somehow a little wistful. But Edmond was due to arrive; she

turned toward the kitchen and Magda, and the ancient spirit of Eve slept very quietly within her.

CHAPTER XXII

The Apple in Eden

EDMOND was not entirely unhappy in his marriage, nor on the other hand, did he find his complete fulfillment in it. While he still delighted in the flashing loveliness of his mate, he still lacked the companionship he desired, and was almost as lonely as in the solitary days. Nowhere could he find understanding, and conversation was of necessity limited to topics and viewpoints that seemed to him elementary. As always, his recourse was his own self, and his conversation was constrained to the give-and-take possible between his two minds. He still read, but with lessening interest and growing boredom — philosophy, literature, science, all had a familiarity and a sameness that disgusted him, and the rare jewel of novelty was becoming almost undiscoverable. He began to perceive that he had exhausted human resource; the nature of man and his works were too familiar to intrigue him longer. So, for the most part, he sat and thought his own thoughts. These mostly devolved upon highly theoretical and extrapolated deductions, since he had abandoned for the time his routine of experiment. His esoteric labors were largely in the field of philosophy, as for instance, when he reflected in this fashion:

"Flammarion, a nice thinker, glimpsed one interesting fact, though it is a truth based rather on man's limitations than on actuality. In eternity, says Flammarion, whatever *can* happen *must* happen, which is to say that all possible combinations of events will oc-

cur if only enough time be granted. Then, he reasons, since there is an eternity behind us as well as before, in the past as well as in the future, it follows that everything possible has already happened. Specious and logical; let us consider it."

And his other self at the same time promulgated its answer: "The error is obvious. What Flammarion has done is merely to consider Time as one-dimensional. In effect, he takes an infinite line, places a dot on it to represent the present, and argues thus: Since there is an infinite number of points on this line to the left of my dot, it follows that *every possible point* is located there. A fallacy, obviously, since there is an infinity of points, to one side or the other, not on the line at all! There exists, in fact, not one Time but innumerable parallel times, as Einstein infers in his pleasant little fantasy. Each system, each individual, possesses his own little time, and these *may* be curved as Flammarion argues, but certainly not in the sense he believed."

So Edmond amused himself with his own cogitations, finding a dim and unsatisfactory companionship within his own mind. For here Vanny failed him as utterly as all the rest of the human world; however much she wished, she was simply unable to enter into an understanding conversation with her strange husband.

However, an element that troubled her in far greater degree than his intellectual casualness was his physical indifference. He seemed satisfied by the optical sensation of beauty; when Vanny presented herself in a guise she thought becoming, he was ready enough with admiration, but his caresses were dishearteningly rare. There were few of the nights of ecstasy; little indeed of the glorious abandon of those early weeks! Edmond refused to revive that

disastrous intimacy, knowing that neither could sustain it, and Vanny danced in vain before the grinning skull of Homo.

"I am no more than an ornament, a pet, or a dancing doll," she thought unhappily. "I have nothing of companionship to give, and now already my body palls." She was puzzled, weary, and wistful. Her body, having once known the caress, ached endlessly for it.

PAUL'S rather frequent morning visits were in some ways a solace, for at least he provided a sort of friendship she missed. His devotion bolstered her waning self-confidence, and kept alive the spark of pride that Edmond had nearly smothered with his indifference. Somehow, too, Paul sensed her perturbation, and his ready sympathy failed this time to anger her. A pent-up emotional volcano was threatening to burst its crust of convention and training; a crisis approached.

Occasionally as in the past Paul brought bits of poetry for her criticism; he used to enjoy her ready approval and encouragement. Somehow of late she found this hard to give; was her taste changing under Edmond's dark influence, or was Paul's work, lacking perhaps some lost inspiration, deteriorating? As for example, this particular morning. They sat on the living room davenport, Paul in his usual careless disarray, and Vanny, interrupted in her morning routine, in a simple housedress. He was reciting a short poem that he called merely "Autumn."

"Her eyes with their unanswered
dreams

Are bitter, and her face is old,
But from her withered body gleams
A brazen mockery of gold
Shining like ancient wealth untold;
There is a coolness in her breath.

The handmaiden is she of Cold—
The harbinger is she of Death."

Paul paused for her comment as he concluded the octet, and his silence roused Vanny, who had been listening half in reverie.

"Do you like it?" he asked.

"Why—it's very pretty, Paul, but isn't it a trifle—well—obvious?"

"Obvious!" He looked hurt. "Why, Vanny! It's not supposed to be subtle; it's just an impression."

"I'm sorry, Honey. I wasn't paying very close attention, I guess. Perhaps I read a meaning into it that you didn't intend."

Paul looked at her. He noticed the distraction in her features, the curious haunted look in her dark eyes, the unsettlement in her aspect.

"Something's troubling you, Vanny! Won't you tell me, or let me try to help?"

She returned his gaze, seeing as if in memory the fine blue eyes, the sensitive features, the yellow hair she had loved. Old Eve, somewhere deep in her being complained bitterly at that moment; Vanny's body ached for that which Edmond denied it.

"Perhaps," she replied. "Paul, do you still love me?"

"You know I do!"

"Do you still find me—attractive? Could I still thrill you?"

"Vanny! Is it clever or kind to torment me with suggestive questions?"

Something alive behind the turmoil that was Vanny's mind was urging her on. That part of her which was Eve prodded the part which was civilized, the being born of training and heredity opposed the being born of the first primal cell. She reached a sort of decision. From her position properly at the far end of the davenport from Paul, she dropped one small foot to the floor,

leaning toward him.

"Kiss me, Paul. I want you to."

HE LEANED forward. Suddenly her arms were about him. He felt her lips against his with a burning softness. There was an abandon, a fierceness about her embrace; this was certainly not the Vanny of old! His arms tightened, pressed her more closely.

Suddenly she threw back her head; her eyes with their strange light burned close to his. "Have I smothered the fire, Paul?"

"Vanny!" he was a little breathless. "I don't understand! Don't you love him?"

She disengaged herself, drew away, and faced him with her eyes still burning and her cheeks flushed.

"Yes, Paul. I love him. I love him as greatly as it is possible for me to love."

"Then why—?"

"Listen a minute, dear. I tell you I love him. I am not cheating, not stealing anything from him. What I am giving you is nothing to him, it is a part of me he doesn't want, a part he has rejected. Do you understand?"

"No," said Paul, "I do not, but neither do I question."

"I am stealing nothing from him," repeated Vanny, as if to herself. "I am living in the only way I can live. I am doing the only thing it is given me to do. I do not think there is any higher wisdom than that; if any exists, it is Edmond's province, not mine."

She seemed suddenly to realize Paul's presence.

"Honey, I want you to go now. Come back tomorrow morning. Promise me."

"Of course," said Paul, still amazed as she hurried him out of the door.

She turned back through the living room, wandered into the library. The skull of Homo grinned at her with a

replica of Edmond's sardonic smile.

"All right, if you know much!" she snapped at it. "What can I do?"

The little skull grinned silently at her.

CHAPTER XXIII

Conversation on Olympus

EDMOND watched the writhing market as it slid closer to the edge of the second precipice.

There was a crowd at the customer's desk; those fortunate enough to be in position to buy were grabbing for bargains that seemed unbelievable in contrast with recent prices. A wave of buying was cushioning the drop.

A customer's man stood beside him.

"You were certainly lucky, Mr. Hall. You got out just in time."

"I allowed myself plenty of time," said Edmond. "The break came almost a week later."

"Hmph! Maybe! Are you buying today?"

"Not yet."

"Not yet! Why she's already rebounding. You'll buy your line back fifty points higher!"

"Did you ever review the history of past panics?"

"Yes, but this is different! Earnings are good—business is good. Money's plentiful. This break is the result of internal technical conditions!"

"So," said Edmond, "is an earthquake."

For some time longer he remained, observing rather the crowds than the quotations. The frenzy of the first break was over; some watched the gyrating prices with a dull lack of interest, others with a buzz of comment on each upward flurry. The Morgan group was buying, Rockefeller was buy-

ing, rumor told of a colossal banker's pool formed to support the market. He listened idly for a while, and then wandered out into the street.

He stood at the corner of Adams and Michigan, and watched the jostling autos crowd each other, or scuttle into side streets with audible grunts of relief.

"There is the germ of a true civilization in this," he reflected. "A truly civilized man would be in effect a free mind in a body of machinery."

And at the same moment his other self was objecting, "But the existence of a free mind in a mechanical body would in itself eliminate or prohibit the existence of all art. Art is simply a reflection of man's instincts and training. Poetry and music and dancing are the wooing of birds and fish, and are inextricably tangled with sex. Literature in general is the migratory impulse, the urge to explore, as are painting and sculpture. Philosophy and religion are self-preservation.

"This free brain of ours lacking the instincts that are a part of body could see nothing of beauty, and to that extent is not a truly civilized being."

And his first self, answering, "After all, art is not beauty, since beauty *per se* is not existent. Doubtless, sunrise is the acme of horror to an intelligent bat, and the inhabitants of planets of the red star Aldebaran would consider our green earthly verdure a monstrous and obscene thing. Beauty and truth are not one, save in that each is relative to the observer, and neither exists but in his perception. Thus our argument is its own refutation, and civilization is truly of the mind and not of the instincts."

SO EDMOND picked his way reflectively through the innumerable entities flowing around him, and of a sudden, like an awakening crash to a sleeper, his

twin minds fused, and he found himself staring with a curious absorption at a figure half a block before him. He quickened his steps; a sensation unique to his experience flooded his being.

The woman turned. Their gazes met and mingled like the mingling of molten metals. Two eyes, light like Edmond's, intense as his—a figure slim, and shorter than his own—an awkward and unnatural masculinity somehow inherent in it. Her hands were gloved in black, but the revealing suppleness was there—

Edmond was staring at a woman who was in every physical respect his counterpart!

And even while his consciousness reeled to adjust itself to this astonishing presence, some impish brain cells in the background were grinning. "Dog scent dog!" he thought sardonically, and raised theoretical hackles.

Then he spoke. "I did not dream you existed already."

The woman smiled, still holding his gaze with an intensity equal to his own.

"I have felt your nearness," she said.

Silently the two curious figures moved northward with the crowd, but no more a part of it than two molecules of hydrogen in a current of air. Unspoken, they knew their destination—the woman's dwelling place. North of the river, they turned west through the streets of little shops and decaying buildings, and into one of these.

Upstairs, Edmond found a room, a cell like countless others save in the profusion of sketches, pastels, and small oils that covered the walls and lay piled in corners. And these pictures he recognized.

"You are Sarah Maddox, then," he said. "I might have guessed."

The woman smiled.

"I have two minds," said Edmond, "or a dual mind, but not such as the

beasts call a dual personality."

"Yes," said Sarah.

"I have known a City, not past nor present, but a place where I am at one with life."

"I know," said Sarah. The two remained staring at each other; there was a comfort in their proximity, as of two friends, meeting suddenly in a far place. Then Edmond spoke again.

"I do not think these are cities of reality in *their* sense. They are symbols, rather, of what may be. They are that world toward which we tend, for now I perceive our meaning, what we two imply."

"You need not explain," said the woman. "I know."

"Colors and objects are your media. I must phrase my thoughts, having but inadequate words."

Sarah smiled.

"Our implication is this," said Edmond. "That we are a mutation. We are not prototypes of things yet unwombed of Time, but part of a change that is. Weissman glimpsed the truth, and Evolution is not the slow grinding of environment on the clay of life, but a sudden unspringing of higher forms from that clay. The age of the giant reptiles—then suddenly the age of mammals. A fern, and then a flower. Things stable and stationary for a geologic age—then the crash of a new and stronger species, and catastrophically, that age is ended.

"*They* out there in the street will bear more like us, and we shall replace them. The age of the dominance of Homo Sapiens shall be the shortest of all geologic eras. Five hundred centuries since he sprang from the Cro-Magnons and destroyed them, as our kind will destroy him. There will be disorders and turbulences, and the grindings of a deep readjustment as world power passes upward to us. Shall

we employ it better than the beasts?

"How to judge? By their standard or ours?"

FOR a time these two smiled silently at each other; understanding blanketed them, and was sufficient. Then again Edmond spoke:

"There is that possible to me now which before was undreamable. That is intelligent conversation. Let us converse of realities, such things as the world of humans discuss not at all, save mystically or sentimentally, or in the gropings they believe philosophy. Let us speak of all things that are, their beginnings and endings."

The woman smiled.

"I speak," said the superman, "in poetry—not because, as some have believed, it is the natural mode of expression; nor because it is beautiful, but for this only: that in poetry alone can I imply the ideas which are otherwise inexpressible in language. Meter and symbol can suggest what words in themselves cannot convey; to these beasts this becomes emotion, but *we* perceive the implicit thought."

"Yes," said Sarah.

Edmond, who until then had stood as he had upon entering, now seated himself, and cupped his chin upon his incredible hands.

"Before there was anything, there there was Something, for there was the possibility of being—an *existability*, without which all things were impossible. Nowhere conceivable does that state now exist, but on the remoter worlds, as Neptune, it is approximate. Neptune is thus the symbol of my thought."

Then Edmond gazed intently at the floor as one reflecting, and spoke again slowly.

"I am the Planet eremite, the gaunt repulsor of the light

That falls like icy rain at night, from
 frigid stars and moons a-cold.
 Ye have not seen a world like this—
 the blank and oceanless abyss,
 The nameless pit and precipice, the
 mountain very bleak and old.
 Yet ah—my silence murmureth! Oh,
 Inner Orbs, ye have not heard
 That stillness where there is no death,
 because no life hath ever stirred!
 'But here God's very name is dead!'—
 wept Heaven's mighty Myriarch,
 Then trembling turned away and
 fled, for Something gibbered in the
 dark!"

Edmond raised his head from his
 cupped hands, and gazed with the old
 fiery intentness at Sarah. Comprehen-
 sion surged between them, and he
 smiled, satisfied.

"There was a beginning," said Sarah.

"Creation is simpler to the under-
 standing than Pre-creation," responded
 Edmond. "Even mankind is to some
 extent creative, though the fools un-
 knowing worship in their Creator a god-
 dess instead of a God, since creation is
 a feminine act. Yet there is more to be
 said:

"Dawn amid darkness, while afar
 The little lights in scimitar
 Lit up an age-old barren sea,
 Of nothingness infinity.
 Incipient air and pregnant storm
 Embodied then a giant form
 Still trembling with the power that
 gave it

INTELLECT to damn or save it.

SENTIENCE, from it twi-formed
 birth

Of MALE and FEMALE, air and
 Earth."

Sarah—

"Mine the torch, and yours to light
 it."

Edmond—

"Yours to save, but mine to blight
 it."

Sarah—

"Yours the seed, but mine the
 flower."

Edmond—

"Yours the years, but mine—THE
 HOUR!"

ANOTHER pause, as Edmond fused
 his twin minds into a questing pur-
 pose. He spoke again:

"You are right in saying that mas-
 culinity is of inceptions, and femininity
 of growth. The sperm is mine, but the
 child yours. You are right, too, in say-
 ing that there is a compulsion laid upon
 us, not in the sense of a duty, but as
 a tenet of nature. We two have re-
 ceived a trust, that our kind survive.
 We must reproduce."

Now Sarah's eyes, still gazing with
 unwinking intensity into Edmond's
 own, flamed with a deeper light, a uni-
 versal light that glows in the female of
 all species. That, too, Edmond per-
 ceived, and to his consciousness there
 seemed a discordant note, but he said
 nothing.

"There will be an ending," said
 Sarah.

"Endings are simpler than Exist-
 ence," said Edmond, "and Destruction,
 like Creation, is feminine; I deal with
 things already created and not yet de-
 stroyed. Beginnings and endings are
 your province; mine, things as they are.
 Yours are birth and death, but living
 is mine. As you and all women are
 closer to the emotional primitive, so are
 you more in accord with Creation and
 Destruction, for nature, which is the
 most creative, is of necessity the most
 destructive of forces. Therefore, do
 you tell me of the ultimate end and the
 return of chaos."

Again Sarah smiled that fleeting and
 intense smile. Then, folding her hands,

she spoke softly.

"There came a night when all things lay
As if some wind had swept away
All vestiges of pulsing life,
And left cold bodies to be prey
To primal elements, while they
Renewed their immemorial strife."

"That," said Edmond "is approximate truth. The music of the spheres is a gigantic crashing as they pass into existence and out of it."

But his other self was reflecting, "Intellectually she is all that I desire. Physically she possesses no tiny trace of appeal. Why?"

He stood upright. "There are things to be done. I must go."

Sarah smiled without reply. Both understood that other meetings were inevitable, desired by both. Edmond passed again into the streets of jostling vehicles.

CHAPTER XXIV

Satan

MEANWHILE Paul and Vanny again reclined before the fireplace of the monkey's skull, and Paul spoke of such things as poets speak of. Vanny listened, though a little wearily, yet withal indulgently. She had not colored her cheeks, and her eyes had still more of the inexplicable distance that had been growing therein.

"So that if poetry is but meter—a tom-tom beat—then beauty itself can be reduced to mathematics," said Paul, and paused for a reply.

None followed. Vanny turned her luminous eyes upon him.

"You haven't listened to a word," sulked Paul.

"I have, Paul. All you say is true—

very true—childishly true. But—Paul, you are only a child—all of us are children—to him!"

"Can't you forget him for a minute?"

Vanny did not answer.

"That devil!" said Paul.

"Yes—his name is Lucifer."

"No—Caliban—Vanny, he's mad, and he's making you mad, too!"

"Often," said Vanny, "I have wondered if that *were* the explanation. Perhaps! Only there is something else—something inexplicable—either divine or infernal. Something—"

Her voice dropped. Suddenly she looked at the man with a deeper luminescence in her eyes, so that Paul started back aghast.

"Paul, Paul—he is different—in-human, somehow! At times," her voice grew tense, her eyes desperate, "at times, Paul, he is two people!"

"What, Vanny?"

"No, I mean it, Paul! I can feel it, sense it! Not physically, but I can feel the presence, and both are he! I am afraid of him, Paul, but I love him like—like a dog his master—like—." She fell silent, leaving her simile mysteriously incomplete.

"He is unbelievably powerful," she said, after a long pause. "Nothing ever bars him from the attainment of his purposes. Think, Paul, how he has defeated you at every encounter from earliest school days, and sometimes in rather terrible fashion!

"Do you think so?" returned Paul. "I thought—" He paused, reconsidering the idea he had been about to phrase. It had occurred to him that in this present encounter he was worsting his redoubtable opponent, winning from him the greatest of his treasures. But was he? Was he not rather contenting himself with the leavings, with a part of Vanny that Edmond, for his own insane reasons, had rejected? "He

ravishes her soul like the orthodox Devil," Paul thought, "leaving her body easy prey with the spirit drained out of it."

"I know this," said Vanny; "that if the whole world were set on one course, all the ministers, scientists, rich men, generals, and statesmen wanted one thing, and Edmond opposed it, he could sit in his black-windowed room upstairs and contrive a means to defeat them. You see, Paul, this sense makes his companionship very poignant, but also blasting and withering like a desert sun; and his love is languid and insufferable!" Some rising emotion shook her; tears were beginning to glisten in her eyes. "But I love him, Paul! I want his love and I am miserably cheated!" She was panting in an effort to suppress her tears; an old phrase of Edmond's, the word "experiment," had returned in memory to harass her.

"Whatever he wants is inevitably his," she continued sadly, and then, with a sudden flash of insight: "His one weakness, and like a curse on him, is never to know his desire, to want nothing at all badly enough to make its attainment a satisfaction—not me nor anything in the world!"

She was weeping bitterly now, and her emotion burned rampant on its own fuel.

Paul seized her shoulders, shook her, held her close, so that her eyes were hidden. Her hysteria subsided.

"Vanny, you *must* come. This is madness."

"No, Paul."

She lay in his arms as many times before, and Paul felt as always the seductiveness of her.

"Paul—"

"Yes, dearest."

"Give me love again—human love—like men and women and natural things!"

MINUTES passed—Edmond entered quietly and stood above them with his old ironic smile.

Paul rose pallid and dishevelled, and faced Edmond, who said nothing, but only waited with a smile of bitterness, his blazing eyes on Paul. Vanny crouched in terror, her eyes on Edmond, her hands fluttering frantically.

Silence.

"Well," said Paul at length, "after the manner of such gentlemen as I, I had better ask what you are going to do about it."

Edmond did not reply nor vary his gaze.

"Don't blame Vanny," said Paul. "Blame me, and mostly yourself. You're not fit for her, you know."

Edmond did not reply.

"It's your fault," said Paul. "She wanted your love and you withheld it. She's told me. She needs it, and you made her desperate." He felt a surge of panic, and his voice rose. "You've got to let her go! You're making her as crazy as yourself—Don't you see it? She can't stand it! Let her go, I tell you!"

Edmond did not reply.

"You devil!" Paul felt as if he were screaming. "Will you let her go? You don't want her! Let her find what happiness she can!"

He choked. Edmond did not reply.

An outburst of deep terror was flooding Paul's brain, as he understood that he faced something unnatural. He uttered a cry that was curiously shrill, and drove a clenched hand to Edmond's face. Edmond fell back against the wall and the ironic smile seemed to grow more bitter in a dribble of scarlet from the crushed lips, but there was no change in his intense gaze as Paul fled sobbing.

Edmond turned his eyes on Vanny, who through usage found them bear-

able. She smoothed her hair and garment, and stood before him like an ivory statue, a pallor on her cheek and a question in her haunted eyes.

"For that he should have died," said Edmond, speaking at last, "but that he spoke the truth. You must be released. I will go."

"Do you think, Edmond," answered Vanny slowly, "that anywhere I can now find companionship or love other than that I know with you? Because through you I have almost understood the inscrutable things, other men are as children or the beasts of nature."

Edmond shook his head sadly.

"Do not part us, Edmond," said Vanny. "I love you, Edmond."

"They think we are both mad," she said, "and I, too, think so,—sometimes; but often I know otherwise when I perceive that you are an angel or a devil, or something more than a man. Nevertheless, I love you, Edmond."

AND at his silence, she continued, "Do not punish me, Edmond, because I have these several times yielded to the stubborn bestial clay within me; I have more of the beast than you, but now I swear it is dead, Edmond. I will ask no more of you, no more than you will give."

And again, "Will you understand me, Edmond?"

At last he spoke, gently.

"I am not angry, Vanny, nor do I fail to understand. There is something else between us, something ineradicable and fatal to any further union of ours."

"Vanny, *I am not human!*"

"You are telling me that you are the Devil," she said, "But I love you, Edmond."

"No, Vanny, it is less comprehensible than that. You and I are alien, not in race, but in species. This is why you are unable to bear a child by me, nor

ever will be able. We are fortunate in that, for a child of ours would be far worse than any mixed breed; it would be a hybrid!"

Through his other mind flashed a comparison of Vanny's pale body and his own deformity.

"When the horse and ass breed," he said, "the offspring is a mule. Vanny, our child would be—a mule!"

And as her desolate eyes still gazed into his:

"Perhaps I *am* the Devil, inasmuch as I am mankind's arch-enemy, and that which will destroy him. What else is the Devil?"

A sort of comprehension was born in Vanny's mind. She glimpsed the meaning of her husband, and a feeling of the inevitable disaster dawned in her. Henceforth, they were enemies, alien species, like the lion and the lamb, but with no ultimate lying-down together!

"Then good-bye, Edmond."

For once Edmond vocalized the obvious.

"Good-bye, Vanny!"

As he moved again out into the street, he was more utterly miserable than ever before.

CHAPTER XXV

Lilith and Adam

EDMOND and Sarah, two strange elements in the fantastic quadrangle, seemed for the brief ensuing period to be more perfectly aligned, to possess a greater degree of harmony than the stormy combination that was the origin of their union. Sarah, cold, languid, impersonal, seemed to her companion a fit and desirable consort, and a haven of peace and quiet intellect. Not yet had the demands of his body made themselves evident, and the pleasant poison he had imbibed was yet to

run its course in his nature.

Still, a remnant of the sorrow Edmond felt at the loss of Vanny survived to sadden him. Sympathy and pity were emotions that had grown less foreign to his character, and he was coming to know a sort of familiarity for their twin dolorous faces. Yet the first bitterness of his renunciation passed with the inception of Sarah's complete understanding. He managed to suppress for the time being that sense of beauty which was the one trait that had so far yielded him a modicum of satisfaction. Sometimes, however, the urge returned to plague him, and he wondered anew at the self-borne inconsistency that caused him to find beauty in an alien creature.

"There is a sort of Satanic majesty about Sarah," he thought, "and her self-sufficiency is admirable, and proper to her kind. There is also a very precious element in understanding and companionship, and Sarah only, of all created beings, has that to offer me. It is irrational for me to seek in her a beauty her heredity denies her, the more irrational since her body, and not human woman's, is my appointed lure. And yet, rational or not, I miss the white wistful loveliness that is Vanny's! I have twisted my own nature into hopelessly unnatural channels!"

So he entered into this new union, part of him satisfied, and part of him prey to a longing that survived out of his old life. He moved Sarah away from her drab little room into an apartment overlooking the Park on Lake View Avenue. He doubted whether the change to more commodious quarters affected her at all, for so self-contained an entity was she that her surroundings were of all influences the most negligible. Not that she was a stranger to beauty, her artistry denied that supposition; but she drew her inspiration

from a source far removed from reality, somewhere in the depths of her own complex character. She found, in her quiet and complacent duality, compensations that Edmond for all his restless seeking was forever denied.

As summer progressed, the feeling of discontent deepened, and even the high and Platonic intimacy with Sarah was embittered by it.

"Sarah has failed me now," he thought. "There is no release anywhere for me who am doomed forever to tread a solitary path."

He continued his gloomy reflections. "It is a curious fact that all speculators concerning the Superman have made the egregious mistake of picturing him as happier than man. Nietzsche, Gobineau, Wells—each of them falls into this same error when all logic clearly denies it. Is the man of today happier than *Homo Neanderthalis* in his filth-strewn cave? Was this latter happier than *Pithecanthropus*, or he happier than an ape swinging through Pleistocene trees? Rather, I think, the converse is true; with the growth of intellect, happiness becomes an elusive quantity, so that doubtless the Superman, when he arrives, will be of all creatures the most unhappy. I, his, prototype, am the immediate example."

IT WAS with a feeling of relief that he realized Sarah was pregnant; part of the compulsion was satisfied, part of his responsibility was behind him. Sarah too seemed to feel the lessening of the tension; their mutual interest in this purely rational undertaking of producing offspring bound them a little closer together. But Sarah withdrew more closely into herself after the event; she seemed to have less need than ever for a presence other than her own.

Still, the curious union was surviving.

His nature and Sarah's never met in open conflict, since Sarah's desires were never deep-rooted enough to resist his own impulses; she gave way to him equably, quietly, and without rancor, yielding everything and finding recompense in her unborn child, her art, and herself. So the strange menage ground itself into a sort of stability as summer closed.

CHAPTER XXVI

Eve and Lilith

VANNY sat miserably silent after Edmond's departure; the house seemed as still as the depths of a pyramid, and as old and lifeless. She was dumb, dazed, by the impact of events. The whole impulse that drove the wheels of her life was rendered powerless by her loss, as if she were a motor whose current had been suddenly cut off. She sat unmoving while the clatter of Magda setting the table for lunch scarcely penetrated her consciousness; a long time later she heard the stolid servant removing the untouched dishes. Edmond gone! It was incredible catastrophe. The words were as meaningless as if one should say, "The sun has gone out; the world is condemned to darkness."

The afternoon waned, and still she sat hopelessly, without thought, knowing only the depths of her misery. Finally she was aware that the doorbell was ringing, had been ringing for some time. She would have risen when Magda's heavy tread forestalled her. A moment later she looked uncomprehendingly at the figure that entered the room; realization came slowly that it was Paul, very excited.

"My dear!" he said. "I came at once, as soon as I found your note."

"Note?" Vanny said vaguely.

"Of course! Here!"

She glanced indifferently at the misgiving he presented; truly enough the script was her own, confusing in its accurate familiarity the very testimony of her memory. A single line, "Come back, Paul," and her own signature, perfect to the shading of its letters. Why had Edmond inflicted this irony on her? Was he, she wondered, attempting a mistaken kindness, or, out of the depths of his wisdom, did he indicate to her the course he considered best? No matter, she concluded dully; it devolved on her to follow his implied command.

"He's gone," she said, turning vision-haunted eyes on Paul, who still panted in excitement.

"And a good thing, dear! We'll have you free, start proceedings immediately!"

"No," said Vanny. "I don't want that."

"Why, dear! That's the only course!"

"No," the girl repeated in the same monotone. "If Edmond wishes to be free of me, he'll contrive it himself."

"Of course he will! And at your expense, Vanny—at the cost of your character!"

"He won't do that, Paul. He'll find his own means, if he desires it."

Now, with the presence of a friend whose sympathy she trusted, the apathy was transforming itself to an active misery, a poignant, unbearable pain.

"I'm terribly unhappy!" she muttered, and began to weep. For a long time Paul, sensitive to her needs, made neither sound nor movement, but when she began to quiet from sheer exhaustion, he moved close to her, held her in his arms, and tried to comfort. After a time she was pale and dry-eyed and calm.

"You will stay here tonight, Paul,"

she told him.

"Not here! You'll come away with me!"

"Here," reiterated Vanny.

SO THERE began a queer period in the lives of these two. Paul was nearly happy in the possession of the being he desired. He worked with unaccustomed energy at his writing, using Vanny's desk in the living room, and it seemed to the girl that his work was of more merit than heretofore. He was elated too with the acceptance of a short story by a magazine of small circulation but of decided literary repute; shortly afterward the same publisher accepted a poem.

As for Vanny, she was far from happy, but her misery drove her to Paul for comfort. She clung to his companionship with a sort of despairing avidity, feeling her loneliness insupportable without him. He was simple, affectionate, understandable; sometimes she experienced a feeling almost of relief at the realization that his thoughts were of her own degree, human and comprehensible. More than that, she could hold conceptions beyond his powers, and could if she wished master his nature as Edmond had mastered hers. There was a grain of comfort in this, for she perceived that she retained something within herself of Edmond's more than human abilities.

During this quiet and unhappy interlude, Vanny was relieved at least of the necessity of financial worry. She had her own account at the bank, and her own deposit box. An inspection of this revealed a surprisingly thick sheaf of securities, considerably more than she had believed she owned; it did not occur to her that Edmond possessed a duplicate key.

So life dragged along; the new year passed into being and the planet swung

through the spring and summer arcs. Little by little the distant look was fading from Vanny's dark eyes, as the incredible sensations and events of her dreamy life with Edmond slipped out of the grasp of her memory. She realized their passing as her recollection of certain elements grew misty, but she had no power to fix them since they included conceptions alien to her mind. She was drifting back, away from both the horrors and the beauties she had known; she watched these latter vanish regretfully, but the turning of time seemed only to measure their disintegration. She was helpless either to aid or hinder the process.

Sometimes she helped Paul at his work with an incisive criticism or a suggestion full of possibilities. More often she read while he labored, for her husband's great library was at hand for her use, but the things she dug out of the volumes seemed usually meaningless gibberish, lacking the interpretation of a greater insight than her own. At other times she simply sat and dreamed; Paul was sometimes amazed by the stretch of time she could while away in this fashion—she who had been of old so active, so impatient of idleness. She found the library a solitary retreat, since Paul seldom entered it; the skull on the fireplace grinned at him with too ironical a smile.

AND then, as autumn sent a preliminary chill into the air, she perceived a restraint in Paul's manner; with something of Edmond's unbelievable perspicacity, she understood that he was concealing some unpleasantness from her.

"Paul," she asked him suddenly as he sat at the desk, "have you seen him?"

"See whom, dear?" He looked up, perturbed.

"Edmond, of course! Where is he?"

"What makes you ask that, Vanny? How can I know?"

"Where is he, Paul?" she repeated.

He surrendered gloomily, "I saw him, dear. He's living in an apartment on Lake View; I think he's living with a woman."

Vanny's pallor increased so violently that Paul was startled; he sprang toward her from the desk, but her eyes met his steadily enough.

"Tell me where, Paul," she said, "or take me there. I want to see her."

"I won't! You can't ask that!"

"I want to see her."

"She's ugly," said Paul. "Thin and shapelessly angular, and she looks like him."

"I want to talk to her."

"But he'll be there!"

"Not in the morning." She rose, moving toward the hall; Paul gave in with a sigh and followed.

"I'll go with you then," he said with a wan smile of surrender.

Edmond had taken his grey roadster; they found a taxi, and sped silently along Sheridan. Vanny spoke not a word until they angled off the teeming Drive to Lake View, and halted before a brown brick apartment building.

"Wait for me," she said then and walked unhesitatingly toward the boxes in the hall; his name was there; he had not deigned to alter it. She pressed the button beside it; finally the door buzzed in mechanical invitation. She pushed it open; there was an automatic elevator, and she stood tense during the interminable ascent, half hypnotized by the long bee-like drone of the mechanism. The apartment door opened as she approached. Sarah looked out at her with intent, expressionless eyes, and instantly Vanny perceived the nature of this being for whom Edmond had abandoned her.

This was a woman of his own sort, able at once to be companion and mother, capable of permitting the fulfillment of his life. Her mood turned suddenly to extreme melancholy. Now indeed, with such an opponent, it was a hopeless task to win Edmond back!

THE woman Sarah still stared without speech, and Vanny felt constrained to break the silence.

"I am Mrs. Hall," she said. The other nodded silently, swinging the door wider and moving aside. Vanny entered, and the door closed. She stood surveying a room obviously of the better furnished-apartment class. Sarah motioned her to a chair and sat herself facing her. The tense silence settled over them again. "I wanted to see you," Vanny said finally. The woman nodded.

"I wanted to understand," said Vanny, "since I have lost him utterly—lost him," she added in bitterness, "because I was a fool!"

"Do not imagine," said the woman in a voice of curiously flat intonation, "that your little peccadillos could drive him away. They are without meaning to him."

"Do you love him too?" Vanny said.

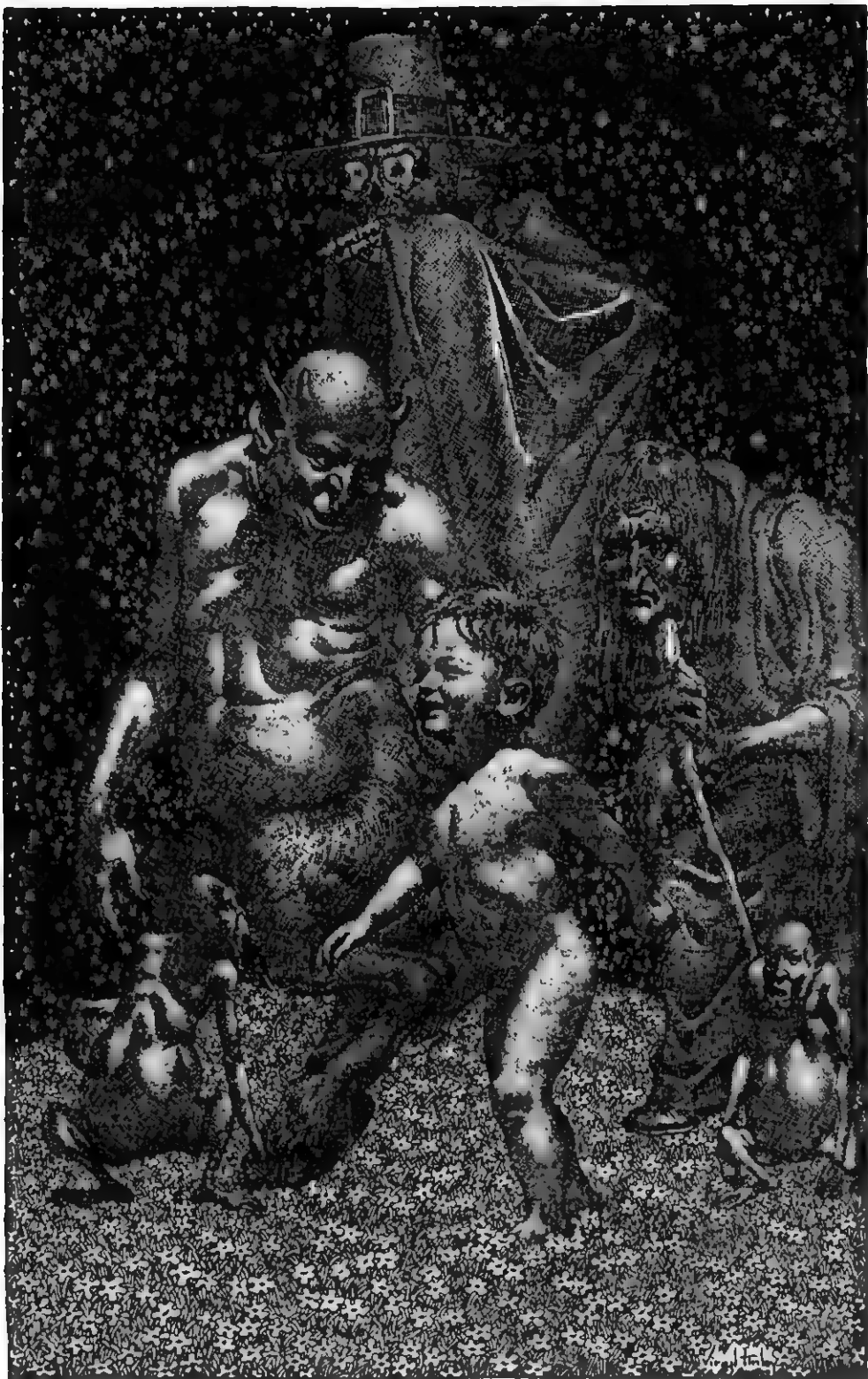
The woman spoke. "I have that which I wish," she said, and was again silent.

"You do love him," said Vanny. The other made no reply.

"I am sorry," said Vanny finally, "that I came here on such a hopeless errand. You understand that I must do what I can to draw him back; at the least, I must try."

The woman turned her strange eyes on Vanny, and spoke.

"No need to try," she said, "since you have never lost him. He seeks an illusion called beauty which he finds in you but misses in me."



He was not a man in a new world; more like a babe in an old one!

A tinge of joy showed in Vanny's face. "Did he say that?" she asked.

"He says nothing. There is no need. Now do leave here and try no more to draw him from me, since you will inevitably succeed, and the course is disastrous."

"Disastrous! To whom?"

"To each of the four," said Sarah, "but mostly to Edmond." Again she was silent, while Vanny wondered dimly how she knew of Paul.

She rose to depart. "I've got to try," she said, moving toward the door. The woman Sarah watched her silently, though Vanny fancied she saw a glint of regret in the curious eyes.

CHAPTER XXVII

The Loss of Beauty

SARAH was to bear Edmond's child in March, and late September found their curious establishment as settled as any normal household.

But as the period of her pregnancy progressed, Sarah drew more and more into her own being. Never oppressed by that craving for an understanding companionship that drove Edmond, Sarah now found still less need for any outside entity. Yet she did occasionally seek his caresses, and these he gave, although hopelessly and indifferently. And the old loneliness returned to Edmond with a strange new intensity born of disappointment.

"Beauty has vanished out of my world," he thought, "and nothing is left me save a being who is to be a mother, and therefore is no companion."

But his other self meanwhile was regarding a visual memory of Vanny, with her body that curved, and was reminiscent of glades and sunlight and things earthly.

"The curse of the Cave still persists,"

reflected Edmond, "though differently in me than in men who daily go out to the hunt leaving their females to tend fires. Life moves in cycles and each individual finds his little circle encompassed by the greater circle that is society."

One night he saw Vanny on Michigan Avenue, walking with Paul, and moved by that pity which he had come to know, he slipped back into the dark entrance of the North American Building, that they might not meet. An ancient longing surged through his duality, and the sight of Vanny's pallor twisted in his breast like an oriental kris. Nor did he fail to notice the questing glance of her luminous eyes, peering here and there in a hopeless search, while Paul talked earnestly of something negligible.

"She feels my presence like Sarah," he thought. "The suppleness of her mind amazes me; who can limit the potentiality of the simplest brain? She has learned more of me than I had believed possible."

But the anguish of his loneliness persisted below the icy speculation. He wanted again the virile love of humans, and Sarah's languid caresses seemed ever less desirable.

"I have tasted an opiate," he thought. "Human love is not for my kind. Vanny and I are as poisons to each other, and as I kill her mind with forbidden visions, so does she destroy my body with fatal pleasure."

"Alien are we, natural and appointed enemies; no good thing may ever come out of this brief union of ours."

He followed with his burning eye Vanny's diminishing figure.

"Silver flame of Attic woodlands," he thought. "Why does she, of an alien species, draw me as Sarah should? I who should call kind to kind, as mare and stallion, woman and man?"

And his other self supplied the answer.

"Because all my associations have gathered around the normal woman-body. Beauty is to me what experience has trained it to be, and Vanny, not Sarah, is its embodiment."

OFTEN a vague idea of suicide beckoned, and as often a stubborn pride of race rejected it.

"Surely no race whose first member is suicidal has any survival value. On me lies the primary burden of proving my species' fitness."

And his other self replied, "This is the primitive idea of Duty that misleads me. This is patriotism, and pride of blood. Peace is a thing infinitely more to be desired; and peace is easy of access, and I know the way."

But his first mind, considering: "Still, the idea is in itself repugnant, as it confesses the weakness of my kind. Better for me to live and suffer, that the coming of my race be easier."

And his other self again, "Why aid these successors into unhappiness like mine? If come they must, then let them, but do not usher them into Hell. Cerberus had three heads, not two."

And finally, "Neither the pursuit of knowledge nor that of power is happiness. Happiness hides in its own pursuit. Happiness is the quest; content, the achievement. But for me, who come before my appointed time, there is neither the one nor the other, since the goal is in a not yet extant future."

But always in part of his mind the image of Vanny persisted. He perceived that love had two components, companionship, which is the intellectual, and passion, which is the physical element.

"My love is thus sundered, so that I love one with my brain and another with my body."

And he smiled his ironic smile, whispering to his idle self, "Of these two, the bodily love is sweeter!"

"There is a delight I can never know," he reflected;—"the unity of these two elements of love. Sarah's mind in Vanny's body—"

His idle mind envisaged for a moment a dark thought, to be toyed with an instant, weighed, and rejected. He perceived that in certain things fate is inexorable, and monsters are always to be abhorred.

Then his twin minds reverted to Sarah—placidly intelligent Sarah, who alone could accompany him through the mazes of his thoughts, but could not follow the broad and easy way of the body—Sarah, whose pleasure in the bearing of a child was greater than that in its conception—Sarah, who knew nothing of strong human love, and desired nothing of it, her mind unpoisoned by forbidden pleasures.

"She is normal of her kind," he thought. "In the placidity of pure intelligence, she is unaware both of the pits of despair and the peaks of pleasure; her existence is an equable flowing out of ideas, unruffled by any emotional breeze. But I am a creature of the depths, toiling forever toward shining heights that recede horizon-like before me. I have in a sense perverted myself with alien joys; my nature should have been as Sarah's but that I tasted the poison."

CHAPTER XXVIII

In Which Edmond Refuses Longer to Follow His Fancy

AGAIN one afternoon Edmond returned to his lake-cresting hill, whence he had watched the planet spin under him, and seated himself once more on the remembered slope. He

watched the posturing of a golden finch, a laggard in the migration, in the tree above him, taking a sort of pleasure in its instantaneous grace. He answered its twittering, and reply brought forth reply, for all beings save Man and the man-ridden Dog were drawn to Edmond.

"I am less of the Enemy and somewhat more of the Master," thought Edmond. "I am of nature the user, where man is the destroyer."

But his other self sat within like a statue cast in lead, and struggled to think of things remote from that vision which was unforgettable. Like the migratory bird, his thoughts were drawn inevitably to the tropics of his mind; returning from the zones of cool speculation to that torrid equator where the two hemispheres met. So at last Edmond gave himself to his misery, and wrung therefrom finally a sort of dusky pleasure.

"Suppose now," he thought, "I should evoke for myself an illusion, as I know how to do—a mental materialization of her whom I desire, and suppose I endow this image with the qualities of my senses, why should that vision not satisfy me? For I know that it would not. Is it that her thoughts and her personality would be my own? No; for the thoughts and character of the fleshly Vanny are mine."

His other mind replied, "What is lacking in the image of my own mind is Vanny's admiration, her worship and love. These are things I can never endow, for God knows I have none of them for myself!"

Nevertheless, Edmond did evoke for himself a vision of Vanny, and by means of faculties for intense concentration made her seem real and external to his minds. For he found a pleasure in the contemplation of her white loveliness that logic could not argue out of

him; therefore the image that sprang into being was that Vanny who had danced for him by night, with her body gleaming sword-like in the dusk. Edmond made the quiet autumn afternoon into an evening about the two of them, and watched his evocation dance as Vanny had been wont to dance. Thereafter he summoned her, so that she lay warm against him with a well-remembered pressure, and he kissed her and spoke with his vision.

"Are you less unhappy with me than with Paul, Vanny?"

The image replied, "I am the Vanny who was yours, and I have forgotten Paul."

"But do you like to return? To recall things as they were?"

"How can I return? I have never been away."

"That is bitter reproach, Vanny! I am empty enough, lacking your presence."

"I am yours whenever you will it, Edmond."

"No," said Edmond, after a long moment, "my course is wiser in that it contains less of evil. It was the rational thing to do."

"But since when, Edmond, has that been a criterion of yours?"

EDMOND looked into the dark eyes of his evocation with an expression that held unmistakably a trace of doubtfulness; it seemed to his perceptions that in that moment the vision spoke not with his words, but with its own. As if, he thought, he had performed some of the functions of creation, and played on a diminutive scale the part of deity—so real, so living, did this being made out of his longings and imaginings seem to him! He felt a strong temptation to do a thing his reason forbade, to adopt in fact the suggestion of this lovely fancy, and aban-

don reason as his criterion.

"Suppose, now," he argued while his vision nestled in his arms, "suppose I forswear reality, and take as my own this dream I hold, and dwell hereafter in a world of dream, as I can if I so desire. Perhaps happiness is to be found only in such a world, a conclusion not void of logic, since it is but saying that happiness is a dream. If this is true, is it not the part of wisdom to enter the world of visions, where all the law is my own desire, and only that same desire measures either my companion's acquiescence or my own capacity?"

Out of the depths of his intricate mentality, a part of his mind sneered an answer in grim irony: "Nietzsche, here is your Superman who wastes his caresses on a phantom and indulges himself with a dream, like a morbid child! To forswear reality, to dwell in a self-created, phantasmic world, is simply to welcome a voluntary madness!"

He turned again to his vision, and the eidolon smiled into his eyes, as if grateful for his attention.

"It is neither wise nor sane that I dally here with you," he told it, "to cloy my senses with a non-existent loveliness, as is the way of a madman."

"But why not?" replied the image. "Indeed, it is your own statement that beauty, like truth, is a relative thing, and exists only in the mind of the observer. If you must have reason as your guide, will you spurn the implications of your own logic?"

For a while Edmond regarded his creation with that intensity which had been Vanny's terror, and then spoke in the tones which had been her delight.

"Vanny! Vanny!—Say the answer to the question I am thinking!"

The vision trembled, the deep eyes glowed back into Edmond's unfaceable gaze.

"I love you, Edmond. You are not as men, but greater. Demon, or not, I love you. Do not be unkind—"

"Pah!" said Edmond. "I am deluding myself with my own fancy! These are my own words it gives me back!"

He dismissed the image, rose and returned to his car above the hill, but to his backward glance the vista seemed not wholly depopulated. For beneath the tree of the finch there still lingered a misty glory, as if the intensity of his concentration had bound some wandering atoms for a while into a semblance of a form, and for a little distance this golden mist pursued him beckoning. Edmond knew better than to heed, but watched with a certain speculation in his eyes as it danced with a diminishing glory in the sun.

CHAPTER XXIX

Edmond Again Follows His Fancy

EDMOND turned the nose of the gray car toward the apartment on Lake View. As the miles slipped by, the low purr of the motor became intelligible:

"Vanny . . . Vanny . . . Vanny," it muttered in endless repetition. The strident horns about him shrieked a cacaphony whose endlessly recurrent theme was "Vanny"! So he came unhappily to the apartment building that housed his strange domicile.

He slipped his key into the lock of his letter-box; Sarah never bothered to have the mail brought to her, for it was inconceivable that it should contain anything of interest to her. On Edmond, however, fell the responsibility of keeping oiled the machinery of living—there were bills to be paid, and occasionally a technical communication or royalty check from Stoddard. Momentarily Edmond paused startled. Out

of the customary series of typed addresses slipped one whose directions appeared in delicate mauve script—an unassuming gray little envelope—thin to the point of transparency. Vanny!

A rare thrill of pleasure rose and subsided in Edmond's being. Whatever Vanny might write could not alter circumstances, could not make those two alien creatures into a common kind, nor break the unbreakable circumference of the circle Time.

He slipped the letter among the several others, and stepped into the automatic lift. In a moment he was entering the apartment which at present sheltered Sarah and himself. As always, Sarah was not in evidence; she would be in the rear, in the second solarium, engaged with her curious little landscapes, or turning obscure thoughts this way and that between her twin minds. It was seldom that they two saw each other now; Sarah was satisfied to be relieved of the burden of procuring food for herself, satisfied in her pregnancy, self-satisfied in her art.

Sarah was a great artist, Edmond admitted to himself—a worthy Eve for her generic Adam, the superwoman intrinsic. She was unharassed by her environment, adjusted, happy, where Edmond was of all these the antithesis.

Thus Edmond reflected in one of his minds, while the other still surged sea-like about the fact of the letter. He opened it and drew forth a single thin sheet of gray paper, at which he glanced, absorbing the few lines with his instantaneous perception:

"The love that is too faint for tears,
And scarcely breathes of pain,
Shall linger on a hundred years
And then creep forth again.
But I, who love you now too well
To smile at your disdain,
Must try tonight that love to quell,
And try in vain."

EDMOND crumpled the paper into a ball and tossed it from the open window, watching it spin downward a dozen stories like a little planet—a world peopled by the hypotheticals and conditionals of his life with Vanny—the ought-to-be's and might-have-been's. Then his eyes turned to the Satellite, on which he seemed to gaze downward as it lifted gigantic from the far end of the moon-path. He watched it pour down its rain of silver that the wave crests cracked and flung back in fragments like white petals.

"The dead world strews flowers on the grave of the dying one," he thought, and suddenly perceived this moon as a world ideal. Lifelessness—the happy state toward which all stars and planets tend, when this miasmatic Life-disease had vanished cured. The smaller world yonder, burned clean by solar fire, scoured clean by the icy void—a world of airless rock—there hung the ultimate, the desired end. Heaven and Hell swinging forever about the common center; Heaven the world of annihilation, Hell the world condemned to life. He crystallized his thought:

"Long miles above cloud-bank and blast,

And many miles above the sea,
I watch you rise majestically,
Feeling your chilly light at last.
There's beauty in the way you cast
Split silver fragments on the waves,
As if a planet's life were past
And men were peaceful in their
graves."

A simple conception, reflected his other self—nothing to imply, naught of the terrible inexpressible, a thought bound neatly into language. And yet, in some way, a lofty thought. Edmond was in a measure satisfied, as one who has at last conceived the solution of a difficult problem. And suddenly he was aware of Sarah's presence.

She stood behind him as he turned, her gaunt little body merging with the gloom, her eyes blazing in the lamp light with their accustomed intensity. Strange and alien and rather hideous she seemed, with her fleshless limbs and ashen skin. "I have known a body that was vital, with the curve of ivory and the flash of fire," he thought, "but Sarah's glows only with the pale gleaming of the intellect, which is but a feeble little glimmering that shines through the eyes."

In the moment that their eyes met, Edmond perceived that Sarah was aware of his longings and his misery, and that she held this knowledge without rancor, without anger, because she possessed all of him that she desired. This Sarah understood, having perceived the poison in Edmond's soul, but she perceived without sympathy, comprehended without appreciating, since emotions were things outside of her being. She saw, even as Edmond had seen, the harm and the danger to himself from thus playing with forces unnatural to him, but she had resources and outlets which were denied him; she was within herself sufficient, where Edmond was driven by his unhappiness. Seeing him thus troubled, she spoke:

"This is a cruel and foolish thing you do, Edmond; you stand at the window overlooking life and are at odds with yourself."

Edmond answered, "But half of me stands overlooking since half of me struggles in the stream of life wherein I cast myself."

"Being as you are, it is your privilege to soar above that stream."

"But it is my pleasure to bathe therein."

"It is a poisonous stream, Edmond. Whomever it sucks into itself, it draws out that one's strength, soiling his body and rolling his soul and his soul's

dreams into the mud of its bottom that these things may add themselves to its flood. It is a poisonous stream and its proper name is Phlegethon."

"This that you say is true," answered Edmond in a low voice, "but it is also true that for all that it exacts, Phlegethon renders a certain price, paying its accounts with the scrupulous exactness of a natural law. In the filth of its bed are hidden jewels that are very brilliant and in all ways desirable, and those that are rolled deepest in the mud and granted the most lovely of these."

"They are ill-starred gems, and are the very essence of the poison."

"Nevertheless," said Edmond, "they are extremely pretty, and sometimes retain their luster for many years."

SARAH moved close to Edmond, gazing into his eyes with the terrible intensity that was her heritage. For a long moment there was silence between them, as they sought to establish that aura of sympathy and of understanding that once had blanketed them. They failed, for the inevitable slow spinning of the Time-circle had twisted them a little apart, so that their twin minds no longer faced squarely each to each. Sarah dropped her eyes; lacking the requisite rapport for that meeting, the communication of the inexpressible was denied her. In her low and equable voice she spoke again:

"Edmond—Edmond—it is a very terrible and obscene thing that you are thinking; I foresee but one outcome."

Then Sarah continued:

"It is far better for you to fulfill your destiny, remaining in your appointed sphere; and it is the poison in your body and minds that calls you elsewhere."

Then Edmond replied, turning bitter at last, "You who speak from pure theory, who lack all experience of these

things, what can you know of the fierce pleasures and pains of humanity? What can you know of that pleasure which burns so madly that it is pain, that pain so exquisite that it is delight unbearable? How can you know that these are not worth all that I surrender—even to that outcome you threaten?"

"I want none of this," said Sarah, "having watched the poison run its course in you."

"No," said Edmond, again passive, "you want none of this, being of your kind perfect, and having no emotion save one. In you emotion is rarefied to languid little tastes and preferences, likes and dislikes that incline you this way and that, but have not the fine irresistible thrust of emotion that is known to each of those down below on the street."

"What have they that we should envy them?"

"Only their capacity to bear suffering," replied Edmond, "and this is a great and ennobling quality, the one quality that may defeat our kind. For this capacity makes of their lives a very poignant thing, so that they live more intensely than we, and cling fiercely to their pauperous lives only that they may suffer longer."

The two were silent again, sending their minds through strange and not-to-be-understood regions. There was no longer a blanket of sympathy about them; something lacked, some common ground on which to meet. Edmond broke the silence:

"I have sometimes wondered whether intellect is indeed worth its price, and whether after all it is not merely the old curse of Adam, divorcing us from the simpler and far nobler things that were long ago. I have a half-memory of such things as are incomprehensible to you, Sarah, who have only a perfect intelligence with which to understand

—I confess I do not know.

"By your standards, and doubtless by all rational ones, this that I go to do now is very foolish, and void of wisdom; nevertheless, I go not entirely without assurance. For this stream of life you hover above is a deeper flood than you know, and there are reasons buried therein that are outside the grasp of our minds,—even, Sarah, of yours—even deeper than the inexpressible. Therefore I go to face that inevitable outcome not wholly without hope, and go indeed with a pleasure greater than I have ever known."

He moved out into the dark hall. Sarah, on whose face the silver dagger of moonbeams now fell, stood silently gazing after him, with no rancor, no ire in her face, but only a languid little regret glinting about her eyes, and a faint puzzlement therein.

CHAPTER XXX

Return to Olympus

EDMOND stepped from his car before the house on Kenmore Street, and gazed up at it. There flickered the light of a hearth fire from the library—the blue glow of *cannel*—symbol of warmth and cheer and welcome flung out into the chilly autumn evening. No other lights—did the room hold Paul and Vanny together? Edmond wondered idly with half his mind; it mattered little. He moved toward the entrance, producing his key.

Edmond unlocked the door, entering; he dropped his coat and hat and ever-present cane upon a chair remembered in the dusk, and turned toward the library whence issued low music from the radio.

Vanny stood before the fireplace of the monkey's skull, her figure outlined against the glow, in attitude poised, ex-

pectant. She wore that purple silken robe which Edmond had himself draped about her, through which her limbs were half-outlined by the flames in long lithe shadows. Her hair was a jet helmet, circling the haunted wistfulness of her eyes. She stood waiting, while Edmond paused a long moment on the threshold, for to his vision the scene held a breath-taking beauty.

He moved into the room, closer to Vanny, studying her. She had grown a trifle thinner, a shade paler, but surely her eyes were less haunted. His second self supplied the answer: "Lacking my presence, the unbearable things she learned are dissipating like heavy gases; having no words to fix them, she cannot recall them clearly, and they grow dream-like."

Vanny dropped to the low fire-bench, looking up at Edmond timidly to read his expression, then with a flaming gladness. Edmond smiled, and for once there was little of irony in his smile. He bent to kiss her, slipping beside her on the bench. There was the scent of wine in her breath and her cheeks were beginning to flush.

"She has bulwarked her brain against my coming," thought Edmond sadly; "my very presence is an assault on her sanity."

Vanny spoke. "Oh, Edmond, I hoped you would come. I have been wanting you."

Edmond's delicate long fingers caressed her; something of beauty had entered his life again, and he was content.

"First I only hoped you would come, Edmond; then when I realized your approach, I sent Paul away, and that was hard to do, and he was very bitter; but by ways I learned of you, I made him go."

Then, "Do you come to stay, Edmond?"

"For as long as is permitted me, dear."

"And is that long?"

"It may be forever—for me."

"Then I am happy, Edmond."

For a space of minutes they were silent, Vanny happy without thought, content in the presence of her loved one. Edmond sat not without thought, but as happy as might be, and whatever of sadness entered him he lost in the mellow flow of music.

"Dance for me, Vanny."

SHE rose, dropping the purple silken robe, so that it lay glistening like an iridescent pool of oil about her feet, then moved from it like an emanation in the breeze. Edmond watched her dance, reveling in the delights of beauty he had thought to deny himself forever. Thereafter he summoned her, so that she lay warm against him with a well remembered pressure, and he kissed her, and spoke with her.

"Are you less unhappy with me than with Paul, Vanny?"

"I am the Vanny who was yours, and I have forgotten Paul."

Startled, Edmond's other self recalled that very afternoon when he sat on the lake-crested hill and spoke with his vision. He noted too that a misty glory had entered the room, dancing and beckoning in the fire-light.

"But do you like to return? To recall things as they were?"

"How can I return? I have never been away."

"That is bitter reproach, Vanny . . ." He paused, suddenly pallid. "Stop, Vanny! The Time-circle is slipping, and it will be all to do over again! Pour me a glass of wine."

Vanny reached the silver decanter that was fashioned like a fantastic Bacchus, filling two glasses. They touched glasses and drank.

A pleasant ruddy mist settled over Edmond's minds, blanketing the terrors that had been rising therein, smothering them, so that the inexpressible was no longer conceivable to him, and the Time-circle slipped smoothly back to its appointed place and the dancing mist was no more. Vanny came to him again in the robe that flashed red and violet in the fire-glow, and he reached out his thin wiry arms, his incredible serpentine fingers, to draw her to him. Her eyes were bright with wine, and the deep terrors behind them were hidden; her cheeks were flushed, and through her half parted lips her breath flowed over Edmond bearing the perfume of wine.

Vanny lay passive against him, the flush of her cheeks paling, her eyelids drooping, her lungs gasping in the too warm, over-sweet air of the room. Above the arch of the fireplace, the skull of Homo leered sickeningly at her.

"Your coming, Edmond—the wine—they are going to be too—much!" Her head drooped.

Edmond rose, and with an effort raised her, bore her unsteadily up the broad stairs. He felt a peculiar pleasure in the weight of her body, always so vibrant and tense, now listless and unresponsive against him. He lowered her to her bed, and by a means known to him, cheated that body of the pay it would have demanded for an evening of ecstasy. But he himself lay tossing most of the night despite a deadly languor.

* * *

THERE began now for Edmond a new sort of life, a dreamy indolent existence through which Vanny moved like the shadow of his fancy. Day after day slid quietly below the threshold, so peacefully that nothing marked their passing save Edmond's increasing

weakness, and a lassitude that grew with deadly steadiness. For this, of course, there were compensations.

He had dusted off his tubes and wires in the laboratory upstairs, and sometimes spent a whole day pursuing his old will-o-the-wisp of knowledge that danced before him now very far over the swamp of the unknown. At times he surprised himself by curious discoveries that lay far beyond the borders of science; and in these hours labored with a vigor and enthusiasm that he had almost forgotten. But at other times he sat most of a day idle with his head upon his hands.

Occasionally Vanny came in, seating herself soundless and timidly in the corner, never daring to speak in this mysterious sanctum unless Edmond first addressed her. She witnessed many great things, but saw them only as rainbow shafts of light and flaming bits of metal; of their import she comprehended precisely nothing. Once she saw him fling a leaden ball against the ceiling by an invisible force, and press it there until its outline marred the plaster, though nothing apparent held it. Another time for her amusement, he twice caused her to slumber so deeply that she seemed to awaken as from a distant world; when she revived the second time, flushed and happy from not-quite-remembered dreams, he told her that she had been dead. For this miracle he used a small shiny gold needle that trailed itself into a copper wire.

Still other times, by means of a little spinning bowl of mercury, he showed her knife-sharp crags and a disastrous landscape on the moon; and once, when he bade her peer therein, she looked down upon a wild roseate glade through which two winged beings moved, not human-like but of transcendent beauty, swift and iridescent. She felt a strange

kinship existing between these and herself and Edmond, but he would not tell her on what world she gazed, nor on what sort of creatures.

Alfred Stein had unearthed Edmond's latest whereabouts, and sometimes dropped in for an evening. Edmond was somewhat amused by the puzzlement of the brilliant little man, and found a mild pleasure in confounding him. At intervals he demonstrated some marvel from his laboratory or propounded some thesis that left the amiable professor sputtering and choleric but nonplussed. He grinned sardonically at Stein's rather desperate attempts to fathom mysteries that were simply beyond his potentialities, knowing that to beings of a single viewpoint even the nature of matter must remain while Stein reconciled himself to the forever incomprehensible. After a deadlock, though Edmond perceived that he still considered himself the victim of chicanery; he never abandoned the attempt to pry out some bit of knowledge or information. He had come to accept Edmond as Vanny had, a being to be enjoyed as one enjoys music, without analysis, without questioning the technique of the creator. His initial dislike had vanished with familiarity; he had acquired a taste for the superman.

VANNY loved these visits. Little desire for human association remained to her, but she reveled in the sense of relaxation that Stein induced; it was breath of sea-air to a dweller on the mountain peaks. She had learned to serve wine or an aperitif, since alcohol seemed to temper Edmond's knife-like presence; under its rosy touch he seemed milder, more understandable, less inhuman in his icy cerebration. Often they sat a whole evening while discussion ranged over the gamut of

mortal experience, all sciences and arts, social theories, politics, and the eternally recurrent sex. Vanny and Stein bore the burden of the conversation; Edmond mostly smoked silently, following their trend idly with half his mind, sometimes replying to a direct question with an incisive finality that seemed to bury that question forever, or again pointing out an absurdity with his scathing smile.

One night Vanny picked up a volume of Swinburne and read aloud from it. Stein listened fascinated—"The Hymn to Proserpine." The piece was new to him, and flowed into him like music. Vanny, intense vitalist, lover of all things sensuous and beautiful, breathed an exaltation into the long, musical, mystical lines that she half murmured. Even Edmond felt the sonorous liquid syllables agreeably, though assaying them in the scales of intellect he found them wanting.

"Ach," said Stein, as she finished, "that is great poetry. 'The last of the Giants' they call him, and that is right. They do not produce such things today—nobody!"

"Times fall away," answered Vanny. "Poetry flourishes when men are stirred to the depths; we fritter away our emotions in the too vast complexity of the machine city."

"Yes," said Stein with his slight accent. "Even a great upheaval of a war is dissipated into a billion little units, and we get a lot of hysterical mush and some mediocre literature. But there is no outstanding figure to dominate his time."

"I think the spirit of a time must be embodied in one man or a group, and that is why in this too swift, too powerful period there are no great artists." Vanny spoke thus, while Edmond sat smoking, staring into the shadows beyond the lamp. "Am I right, Edmond?"

Edmond crushed out his cigarette. "My dear, you and Stein take your poets like cheese: They have to moulder a bit before they're palatable."

Vanny smiled; she was always proud of Edmond even when his mockery turned on her.

"Then you think some current literature is permanent?" queried Stein.

"I do not doubt it, but like all else, the term is relative. A change in fashions of thought or schools of criticism can elevate mediocre work to greatness or doom great work to mediocrity." He lit another cigarette. "I always have found difficulty in discriminating between what you term great and mediocre literature. The differences are rather negligible."

"Ach, the man-from-Mars pose is working again," grinned Stein. "Our poor little human efforts are all about on a par to him."

Edmond smiled and fell silent again. Through his other mind ran a series of disquieting thoughts, and the growing languor oppressed him with its inertia.

CHAPTER XXXI

Sarah

DURING the latter months, Edmond had husbanded his little store of vitality, loosing it drop by drop like a man dying of thirst. Vanny's hungry human body drained it like dry sand, but something of desire had gone out of her, to be replaced by a more intense love of all beauty. Denied the common lot of women, seeking other pleasures, finding different sorrows, she adapted herself thereto and considered herself happy. She demanded less of Edmond's waning strength, and found her compensation within herself.

Edmond, too, found himself content with his renunciation. He lived sur-

rounded by that sensuous beauty for which he had surrendered his hereditary self, and found it sufficient. His audit balanced; when the moratorium was over he could render full payment for value received to a certain River creditor.

But Sarah had not forgotten him. Four months after their parting, in middle Spring, she came to him in a manner possible to her, and told him his son was born. She came long after midnight, while Vanny slept and Edmond lay tossing and weak, in such fashion that he was suddenly aware of Sarah standing beside him, regarding him with that intensity he knew of old. His eyes ranged languidly over her spare masculine form, her awkward carriage.

"He is born," said Sarah wordlessly.

"Show him to me."

She obeyed; Edmond gazed without interest at the curious little tearless whelp, lean as Sarah and himself, the little wrinkled brow and eyes already somber with the oppressive weight of mind yet to come. It clutched Sarah's thin hair with tentacular fingers, and stared back at its sire with a premonitory hint of his own fiery gaze.

"Enough," said Edmond, and the imp vanished.

"Edmond," said Sarah, "the outcome is imminent. I perceive your weakness, and I see that you are foredoomed. Nevertheless, there is still time—if you return."

Edmond smiled wearily, and wordlessly denied her.

"Then you are lost, Edmond."

"I have that which compensates me."

Sarah gazed with the fusing of her twin minds, probing Edmond's brain, seeking for some clue to his incomprehensible refusal. That one should with open eyes approach the foreseen end—welcome it!

"I do not understand you, Edmond,"

she said, and departed with a trace of puzzlement in her eyes. Again he smiled a weary and somewhat wistful smile, with no trace of irony.

"Beauty is a relative thing, and certainly only a dream and an illusion of the observer," he reflected, "but to that observer it is a reality unquestionable. I should be more unhappy than I am could I believe that this beauty that costs me so dearly is less real than life and knowledge and power, and certain other illusions."

AT IRREGULAR intervals Sarah came again, and one night brought news that she had found two other men of the new race, and that they bided their time until the change had brought forth more. This night Edmond sat facing the skull of Homo in the library, rather too weak to rise and retire. Vanny was sleeping some hours since. Sarah came by that way which was open to her, and gazed long at Edmond without disclosing her thoughts; then she told him the news which had brought her. Edmond answered nothing, fixing his eyes silently on eyes that returned neither malice nor longing, but only a faint puzzled questioning and a languid little regret.

"The outcome is very near," said Sarah.

Edmond silently assented.

She swept closer, murmuring in that wordless speech she used. "There is yet time, Edmond. You are needed; out of your knowledge you are needed. Return to me where I am waiting."

Again and again Edmond denied her.

"I have chosen my course, and it yet seems to me that I chose wisely," he replied. "The things I gain outvalue those I lose."

"This is an incalculable madness and a delusion," said Sarah. "Ruin faces you."

Edmond smiled in a weary fashion. "I do not argue," he said. His eyes sought Sarah's thin awkward form as she stood erect and facing him; there was something of suppliancy in her appearance, but her eyes were cold and proud. He scanned her, his twin minds probing and seeking; he perceived with a tinge of astonishment that Sarah too was unhappy. And again after many months, the aura of sympathy descended upon them, the inexpressible lay open before their minds.

Sarah felt it, and her cold eyes lit up with their ancient fire; she leaned tensely forward and sought to convey to Edmond what thoughts were in her minds.

Sarah:

"This is a concourse of dead gods—
They gather wraith-like in the night
Summoning futile powers."

Edmond:

"Synods
Of half-forgotten names of might,
Of names still potent to affright—
Sarah, defy them not!"

Sarah:

"Their rods
Are broken and their priests are fled
Save only you!"

Edmond:

"I serve my gods.
I will not see them starved and
dead—
I make my ancient sacrifice
And drink my ancient anodyne."

Sarah:

"But only you must make it twice
Since only you know other wine!
Edmond; your deities have failed.
Rise from the River! Cast off the
slime
Of Life; look down with eyes un-
veiled!"

Edmond:

"I think my thoughts and bide my
time."

Thus Edmond again denied Sarah, and having ceased, deliberately broke the cords of sympathy that bound them so that their conveyance of thought was constrained to language. Sarah was pale and cold before him, regarding him with deep unwinking eyes.

"I shall not ask again," she said.

"I have fulfilled my destiny with you, Sarah," replied Edmond wearily. "Why do you not go back to those others, to weave your nets with them?"

"Once," said Sarah, "you told me that there were truths beyond my grasp, and thoughts outside the reach of my minds. Now I say to you that while your intellect may reach out and circle a star, yet there are simple and unassuming little facts that slip through your mental grasp like quicksilver, and you are as incapable of grasping these as if they lay buried at the uttermost bounds of the world."

She vanished. Edmond sat staring at the skull of Homo, with a faint wonder in half his mind. "Certainly," he thought, "it is surprising to hear Sarah so bitter. I had not dreamed she was capable of even such mild emotional disturbance as this; there is something wrong with my analysis of her."

And his other self brought forth the answer, a solution so banal, so hackneyed, that he smiled again his slow, weary smile. "Like all women, Sarah is reluctant to admit defeat. She is still feminine to the extent of wanting her own way!"

CHAPTER XXXII

Diminuendo

SO THINGS spun out their course in a peaceful diminuendo for Edmond; his vitality dropped from him as easily as from an aged man, with as little bodily discomfort. His intellect re-

mained unclouded, even, he thought, clearer than before; certain veils that hung there of old had vanished, opening vistas hitherto obscured. The old hunger for knowledge grew less as he perceived its ultimate futility, but the love of beauty remained.

"My last reality is a sensation," he thought, "and so I complete the cycle that lies between the superman and, let us say, the oyster. For now the only difference remaining is that I possess a slightly more varied repertory of sensory organs. But doubtless a truly aesthetic oyster finds its compensations for this; it drinks more deeply of the wine at hand."

He sat now in his chair before the fireplace. Behind him the early autumnal dusk was darkening the window; the usual fire of cannell glowed its reflection on his face. His languor was not unpleasant, as he sat in a dreamy half-reality, a reverie; his twin minds ranged at random through devious courses.

Pictures of Vanny—flaming, incoherent visions that burned in an aura of emotion! Vanny dancing before the fire—Vanny's eyes with the haunting terror in them, and then those eyes lit up with an ecstasy. Vanny sleeping—Vanny laughing—Vanny's body tense and sweet and vital, or that body warm and languorous, with the perfume of wine upon her breath.

"I have made a good trade," he reflected. "Now I pay without regret that which I value little, for this that I prize highly."

Instantly a memory of Sarah moved quietly into his minds, her dry little voice sounding almost audibly her dolorous admonitions. "Edmond, the way of glory was my way; now at the end look back upon the ruin you have made of that which might have been a noble thing."

Edmond replied: "I look back upon a ruin indeed, but I see a charm about it. For the austere pale marble is softened, its outlines merge into the background which is living, and about the broken columns trail the vines of the grape. There is an air about ruins that the structure never owns; Sarah, do wild doves nest in a temple that is new?"

"Words!" said Sarah. "You blanket your life with verbiage, and tuck it in soft and warm while about you the lightnings flash. You argue with your own reason and temporize with your body, and are in all ways unworthy of your heritage—a beater of bushes and a trapper of flies!"

"Doubtless you are right," said Edmond, and dismissed her presence from his minds.

Now he sat for some time weighing Sarah's remarks, and his rational self saw their justice, but he found no real meaning therein. Sarah spoke from a viewpoint he could not assume; understanding was possible between them, but sympathy never. Edmond smiled again as he reflected that between himself and Vanny, exactly opposite conditions obtained; there was sympathy without understanding.

Vanny and Sarah—his physical complement and his intellectual. "It is true then, that bodily things are far more than intellectual; the important elements are not the highest. The mental is not the fundamental."

He reflected in this vein, lapsing again into a reverie, until Vanny returned from some errand. She dropped a package or two, and slid to the footstool between Edmond and the fire.

"Of what do you dream, Edmond?"

He told her, since the thought was harmless.

"I think you under-value those things, Edmond, because they are what you possess in abundance. To me,

everything else is a foundation for the intellect you despise."

He smiled at her, gently as his thin lips and satyric features could manage. "I may not explain further."

Vanny flushed. "Oh, I know!—I'm not a thorough fool! But you see that's why I prize this quality of understanding." A trace of the old haunted light showed in her eyes, and her mien grew a little wistful. "See, Edmond, I traded my soul for the chance to understand you, only the price I had to offer was not great enough."

CHAPTER XXXIII

Evening on Olympus

WINTER found Edmond's vitality, which he had poured out so freely at first, now at very low ebb. He lived out his days in a pallid half-dream, and it was only with effort that he could call his twin minds to clarity. That vigor which remained he hoarded carefully, spending it like a miser's pennies, seeking full value in pleasure for each coin expended. No longer the spendthrift nights of ecstasy, but an avid grasping at sensation that grew ever more dream-like and elusive. He was perforce content to watch the will-o-the-wisp of knowledge dance and beckon without pursuit; he remained mostly in his chair before the fireplace of the monkey's skull, engrossed in dreams and memories like a very old man. He who had dwelt so thoroughly in the future found himself squeezed into the past, as that future foreshortened and the past lengthened.

He could no longer disguise his illness from Vanny, but her anxiety was tempered by a sublime faith in him. To her he was as he wished to be, and his wishes remained beyond her understanding. That he chose to weaken

himself was merely a mystery, not a danger.

One day he called Vanny to him, strengthening himself by means of an alkaloid of his own synthesis. For some hours the drug offered him a modicum of vitality, though he knew that payment would be exacted.

"My permitted time draws to an end, Vanny."

Into her eyes swept a look of terror and a glistening of tears. She dropped to the stool before him, gazing up at him, but saying nothing.

"Remember that when I depart, dear, I go the way of my own devising, and do not grieve."

"No, Edmond!—No," she murmured. "Do not abandon me again! Had I more to offer, you know I would give what you demand, and more, but I have traded all I am for your presence; do not deny me it!"

"I would not," said Edmond, "but that I must. Nevertheless, this parting is but temporary; there will be another union and another—forever."

"Then the parting is hard but not unbearable."

THROUGH Edmond's other self flashed a memory of a chance remark of Stein's dropped long ago when discussing Edmond's picture of a circular Time; "How do you know the curvature is constant? Nothing else in nature is absolute; why must Time return exactly on itself in a perfect circle?" His slim fingers caressed Vanny while his twin minds seized the thought; here at last might come the way of escape, the little crevice in the hopeless circle that bound all things! Perhaps Time moved not in a circle through a fourth dimension but in a spiral through still another, and things did not repeat themselves forever without point or outcome, but varied a little through

each repetition. Perhaps this spiral spun in still another spiral, and that in another, and so through greater and still greater spirals mounting in unthinkable dimensions toward infinity. Progress and hope—two illusions that Edmond had denied throughout his life—were born for him. He perceived at last the ultimate implication of his own philosophy; that the price demanded to make anything—absolutely anything—possible is truly a very small price, involving merely the shifting of the observer's point of view from one angle to another, from this valley to that peak. A surge of exaltation revived him; the untasted poignancy of hope was like a strong drug in his body, and in those moments he was close to happiness. He reflected that after all he had made of his life no ruin, but an edifice of beauty, since he alone of all the millions had uncovered Truth. His other self murmured the one true statement—once terrible, but now inspiring (thus again proving itself!): "All things are relative to the point of view; nothing is either true or false save in the mind of the observer." He turned back to Vanny.

"This shall be only a little parting, and not for very long as we judge time. A few score years for you, Vanny, and it may be only a few hours for me. And then all this shall be again, and perhaps on a happier plane. This I promise, Vanny, and you will believe me."

She smiled a quiet and tearful smile. "Yes, Edmond."

"Think, dear—has not all this been in the past, not very long since? Your memory runs back some twenty-five years; was it not just before that time that this was again? Do you recall?"

"Yes, Edmond; I recall."

"What matter then the unthinkable ages intervening, since we are oblivious of their passing? When again in eternity

the circle or the spiral spins back to this arc, we shall be together again, and perhaps happier. This is my promise."

"Yes, Edmond." Smiled again, wistfully, "If only I were sure."

"I am sure."

"Then it is enough. I shall go with you. What is there for me to fear in Death who have met Him twice already?"

Edmond considered this thought carefully, since it had about it a specious logic. He turned it about in his twin minds, re-formulated it in the inexpressible, and then somberly rejected it.

"No, Vanny. For you is reserved the difficult part; you must live out your appointed time to the very end of the arc."

"But why, Edmond? To what avail?"

"Because, dear, I do not fully comprehend the terrible and obscure laws that govern Fate and Chance in their relations to Time. Because there is a danger that the foreshortening of both our arcs—the obviating of both our futures—may condemn us through what you call eternity to an endless repetition of our act. The future grows out of the past; let us not dry up the spring from which it flows. More than this I cannot tell you."

"As you wish, Edmond, but this will be a cruel thing."

EDMOND took her hands in his incredible grasp. The strange fingers twisted about hers like tentacles, but she thrilled to them, to the inhuman delicacy vested in them. She gazed unflinching into the appalling eyes that bred madness, and their glance softened for now at the very end Edmond had come to a curious realization. As his arc dropped toward oblivion, an under-

standing came to him. He saw finally that it was not Vanny's body alone he loved, but her self-effacement, her loyalty, her adoration, and the many little illusions called character. These were what Sarah, who stood mind to mind with him, had not, nor could ever have, since her heredity forbade it. Thus finally did Edmond confess to himself that he loved Vanny, and thus did he gaze into her simple human eyes, and tell her so. Her answer was only, "Living without you will be tasteless, Edmond, but not so bitter now."

"I must do what I may to sweeten it, Vanny, who have brought to it all the bitterness it holds."

So he took her chin in his serpentine grasp and up-tilted her head, fixing her gaze with his own of burning intensity. Her eyes widened, turned cold and glassy as she surrendered her mind to his keeping for the while; Edmond probed her mentality until it was as if each of his long fingers rested upon some center in her brain, as if he could play upon these as upon an organ's keys. He murmured softly the while:

"Listen to me, Desired One, now on the eve of our dissolution listen and yield you to these things that I command."

She answered tonelessly, "I do yield."

"Then I will that after my departing you shall think never on the manner of it, nor ever return to the place of it, but be content knowing that I go the way of my own devising."

"This I yield."

"I command that your adoration and the love in which you hold me be erased from your memory, so that you think of me no more, nor ever recall this time with regret."

Still tonelessly she murmured, "This I cannot yield."

"For what reason?"

"Because there is a natural law of

my being that forbids it."

For a moment Edmond's minds dissociated, considering separately this statement. "Even Vanny's simplicity eludes me at the end." And his other self replied, "Doubtless there are facts entirely beyond the domain of reason, so that some sorts of knowledge by their very nature remain forever unattainable. Of this degree are mind and life."

He returned his thoughts to Vanny, fusing his twin minds again into a unity.

"Then I will have it thus: That if you cannot forget me, you remember me as a being out of very long ago, so that my reality is dim. That you think of me not as your appointed mate, but as a symbol, an aspiration, and a dream, as a mysterious and not-to-be-satisfied longing, but not ever as a Being made of flesh and mind, who loved you and was loved."

"This too I yield," she said.

"Then I send you now to Paul, whom you will love as well as may be. You will love him for his love of you, since you are now the stronger. Out of his simplicity and his ignorance you will love him; he will be the child you lead and the man you inspire. I give not you to Paul, but Paul to you; out of his fleshly vigor you shall love him."

"I yield this too, Edmond," she said.

A moment more he held her passive gaze, while the false vitality of the drug ebbed out of him. He drooped wearily, then raised his hand from her chin, brushing the finger-tips across her wide, unwinking eyes. "Enough," he said, and her eyes suddenly softened and smiled sadly into his own. He tipped two pellets from the vial he carried, swallowed them.

"Edmond," said Vanny, watching him, "does that hold the way?"

"No, dear. This is the means of our

farewell, to which we go at once."

CHAPTER XXXIV

Night on Olympus

AFTER the farewell, which occurred in a human and quite traditional fashion, Edmond sent Vanny to Paul. "Go now," he commanded, and she departed, little unsteadily but with glowing eyes and an after-sense of ecstasy. She wondered dimly why she left Edmond with so little reluctance; he seemed to her already dead like a memory once poignant out of a distant and half-forgotten past. Yet for a moment her heart wrenched with pain and she kissed him, but his eyes caught hers, and the fire that was burning her died out. Of the happenings during her trance nothing remained in her conscious memory save a sort of vacuity, a feeling of lack or loss. She was unhappy, but not acutely so; if there were pangs, they were quite buried for the present under a sort of lethargy. She moved automatically to follow the course that had been graven very deeply on her mind; below at the curb she entered the gray car that waited there.

Edmond watched her departure with a regret less keen than it might have been had not his lassitude been sweeping back. His drug had been lessening steadily in its potency; the effect of his last dose was vanishing already, and he could feel nothing very passionately. There still remained, however, certain things to be done; he fingered the little vial of alkaloid, and poured the contents into his hand. Half a dozen white pellets rolled in his palm, and suddenly he raised his hand and swallowed them all. A few moments, and the stimulant functioned; he dragged himself erect and moved over to the desk.

He wrote. "I, Edmond Hall, being

of sound mind, do hereby devise and bequeath . . ." He smiled his old ironic smile.

"To my dear friend Alfred Stein the entire contents of my laboratory, together with all designs, books, notes and equipment thereof . . ."

"The entire remainder and residue of my estate to be divided equally between my beloved wife Evanne and . . ." he grinned again—"my sister, Sarah Maddox."

"I appoint as joint executors of my estate Alfred Stein of Northwestern University"—he paused for a moment, still with his Satanic smile—"and Paul Varney . . ."

He left the satiric document on the open desk, and proceeded to his laboratory. Here he removed the accumulators from the atom-blaster, dropping them into a jar of nitric acid. The heavy brown fumes set him coughing, and he picked up another tiny vial and departed.

"Alfred would doubtless succeed in destroying himself with this terrific mechanism," he reflected. "I have left him enough to study over, and enough hints of greater things to occupy his life-time."

Back in his chair before the fire, he looked at the vial he held, shaking the tiny purple ovoids it contained.

"Eggs of nothingness," he reflected, "out of which I am to hatch oblivion." He pressed several into his palm, where they rolled with an obscene fungoid shining.

"A billion centuries, perhaps," he reflected, "before Chance or, the more obscure laws that govern it, shall reassemble the particular molecules that I call Myself, yet this will seem no longer than from this night until tomorrow. Certainly obliteration is a wonderful thing, and the one conqueror of Time." His other self responded,

"Since in eternity all things that can happen must happen, I depart with assurance; all this will be again, and perhaps in happier fashion. I render my payment therefore without regret."

HE raised his hand to his lips, and at the moment he became aware of a presence before him. Sarah stood there, or her image made real to his senses. She was watching him with a little glint of regret in her eyes, and a touch of hopelessness about her mouth. He paused, returning her gaze coldly.

"Paul comes," she said. "He comes to kill you."

Edmond's lips twisted again into their thin smile.

"I had thought my accounts were balanced," he said. "However, perhaps I still owe Paul that satisfaction."

"You are a fool, Edmond. You have traded all glory and the very delights of the gods—for what?"

"For a philosophy and a dream, and a bright little gem of truth, Sarah. Not one of you has more."

"You are a fool, Edmond, and I wonder that your passing grieves me in the least, for all reason denies that it should."

"The more fool reason, then," said Edmond. But his cold eyes softened a moment. "I am sorry, Sarah. Believe me when I say I do not forget you."

Sarah's own eyes turned cold, her hopeless mouth became grim. "I leave you to your fool's devices," said she, and vanished.

Edmond thought silently of her warning of Paul. After a moment he rose, a little more weakly now, and proceeded again to his laboratory. He lifted a revolver from the table drawer, and fitted thereto a silencer. Was it the same calibre as Paul's? What matter, since there would be no inquest? Then he deliberately fired the weapon into a

towel bundled in the corner; thereafter he removed the silencer and dropped the gun into his pocket. The towel and the bullet it contained he tossed into the jar of nitric acid, where it too disintegrated under the evil brown fumes. Edmond returned to his chair before the fire; he watched the low dying flames and occupied his mind with strange thoughts. He waited.

THEN came the sound of a key in the lock—Paul's key, given long ago, he knew, by Vanny. He smiled at the grim irony of the thing, for it amused him to perceive with what bitter humor his god Chance worked his will—that Vanny who loved him should give to Paul who hated him the means of his destruction. And now there moved a shadow in the hall.

Through the library door came Paul, a bleak and desolate figure with staring eyes. He moved into the dim fire-glow; there was a blue glint along the barrel of a revolver he held.

"I am going to kill you," said Paul in a strained and husky voice as he raised his weapon. Edmond stared at him with cold inhuman eyes, through which for a moment looked both minds. The superman was, probably the belligerent opposing mind, building up a mastery, like a man staring down a wild beast. "Lion tamer," jeered a part of his brain.

"I am going to kill you," croaked Paul, and his eyes shifted. He could not look at the emaciated white demon before him, whose eyes now flamed with a fierce intentness. Paul's face was pale and moist with the dread that once again he was about to be defeated. "Where's Vanny?" he muttered. Edmond's thin smile twisted his lips; his opponent's wavering had given him victory, and he held Paul's will.

"She waits for you at your apart-

ment," he replied.

"That's a lie, you sneering devil!" "I have never lied, finding no need," said Edmond quietly. His lethargy was returning as the drug's power waned, and he felt weakness growing within him. He probed the tortured eyes into which he gazed. "This hysterical fool will drop his gun and run from the scene of his crime," he reflected, "in the best tradition of the stage and the mystery novel. Two weapons here would be highly undesirable." He thrust his glance more fiercely into Paul's eyes.

"Listen to me, Paul. When you leave here, drop your gun into your pocket. Drop your gun into your pocket, and return at once to Vanny. Say nothing to her; I seal your lips upon this night forever."

Edmond drew that which he had prepared from his pocket, claspings his incredible fingers tightly about it. He held his helpless opponent a moment longer in his fiery gaze.

"For what evil, I have done you, I render now full recompense," he said, and dropped his eyes.

Silence.

Edmond raised his eyes, and saw Paul's pallid face with sickness and indecision written there, and he saw the weapon wavering and irresolute. He noted too that a familiar misty glory danced behind Paul, and that Homo's expression seemed almost one of welcome. "So at my nadir as at the zenith I still follow my fancy," he mused and smiled his old ironic smile. A command flamed in his eyes; and Paul's hand steadied, as a rush of rage overpowered him. Still smiling, Edmond dropped his eyes again, and the gun crashed.

It was not until he saw the morning papers that Paul realized that Edmond had held in his hand a revolver with one empty cartridge.

VIGNETTES OF FAMOUS SCIENTISTS

By ALEXANDER BLADE

Leeuwenhoek

He was the founder of the science of microscopy.

THE Dutch microscopist and naturalist, Anthony Van Leeuwenhoek, was born in Delft, Holland, October 24, 1632. He died in 1723.

Leeuwenhoek received only an ordinary education, but was a man of financial means who devoted himself, for his own pleasure and amusement, to the manufacture of lenses, and from that became interested in the phenomena of optics. He followed no scientific plan of procedure, although his powers of careful observation enabled him to make many interesting discoveries.

His interest in lenses led to the discovery of the principles underlying the construction of telescopes and microscopes. Being more interested in the revelation of the latter, and an expert workman in the art of lens making, he produced remarkably fine microscopes, for his time, and became such an ardent explorer in the field so opened for research, that he is rightly regarded as the founder of the science of microscopy. He discovered that single lenses of very short focus were preferable to the compound microscopes then in use.

Among the numerous discoveries in the field of microscopy, there were many of great importance. He extended M. Malpighi's demonstration of the blood capillaries in 1668, and six years later gave the first accurate description of the red blood corpuscles. He identified the striation of the muscle fibers, and verified Harvey's theory of the circulation of the blood, by showing its passage from the arteries to the veins by the connecting capillaries. He was also the first discoverer of many minute forms of life, such as Hydra, Infusoria, and rotifers, many species of which he described. In 1677 he described and illustrated the spermatozoa in dogs and other animals, though in this discovery Stephen Hamm had anticipated him by a few months. In 1680 he noticed that yeast consists of minute globular particles, and he described the different structure of the stem in monocotyledonous and dicotyledonous plants. His studies in insect life led him to the discovery of the parthenogenetic reproduction of the aphides, which disproved many supposed cases of spontaneous generation. The first representation of bacteria is to be found in a drawing by Leeuwenhoek in the *Philosophical Transactions* of the Royal Society in 1683. Most of his writings were in the form of letters.

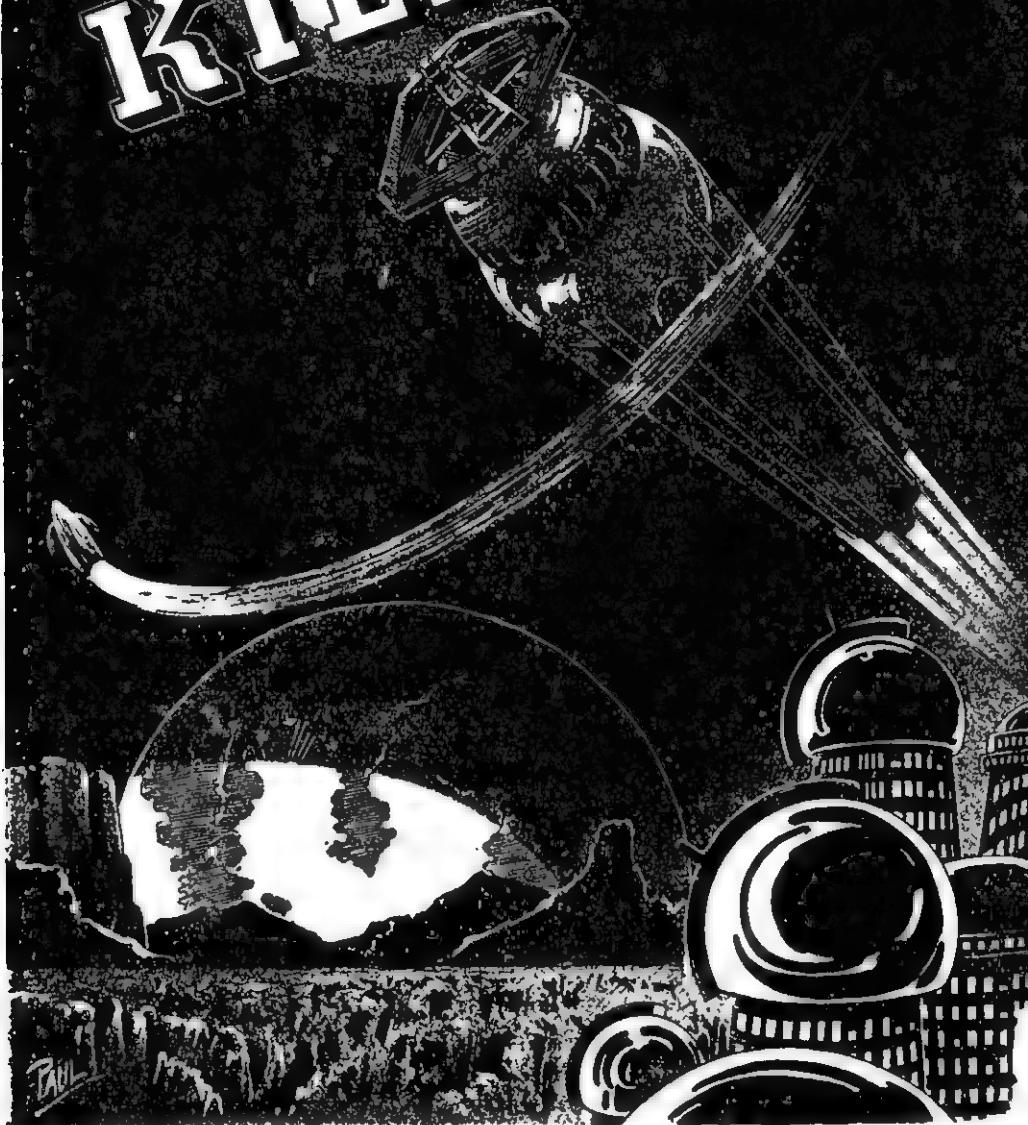
Leeuwenhoek's researches, though not always

conducted along strictly systematic and scientific lines, were noted for their character of conscientious accuracy, and have been of great service in the development later of the study of minute things.

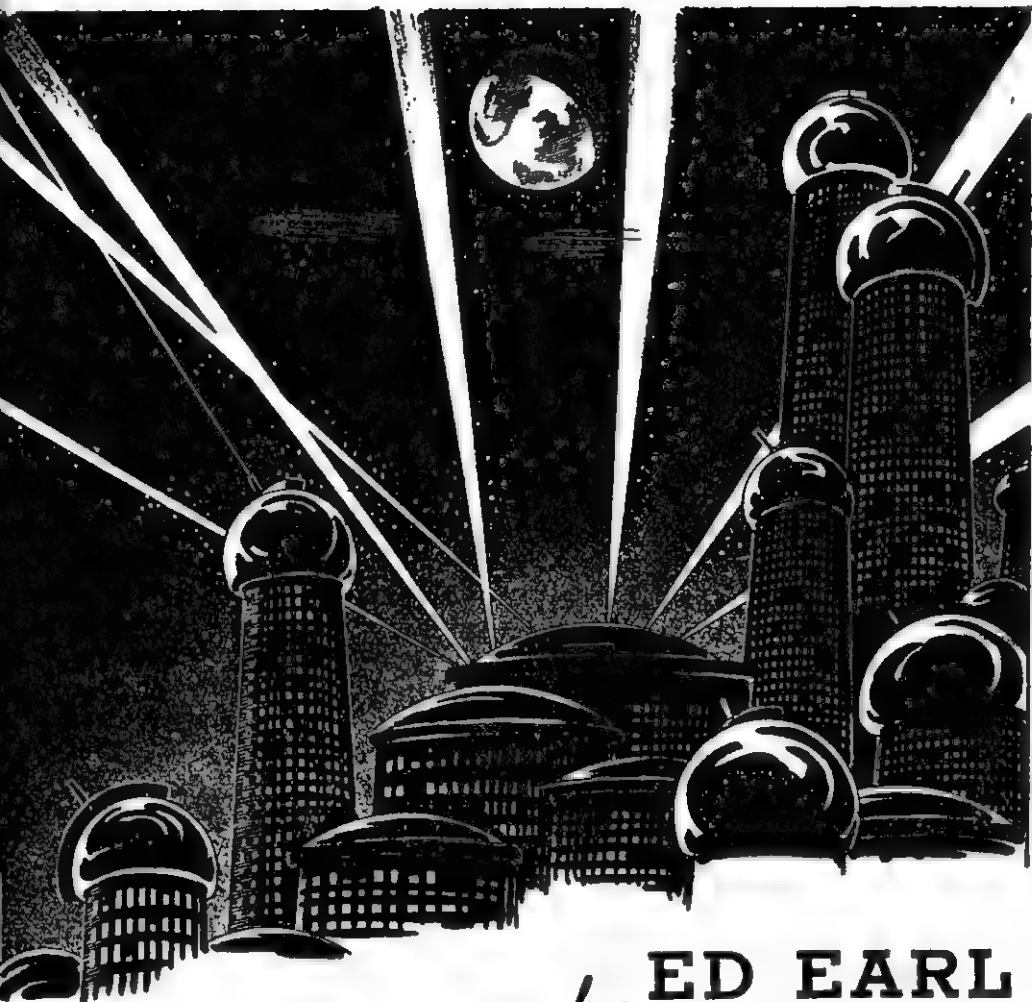
Long before Leeuwenhoek's time it was known that lens-shaped pieces of transparent material—glass or crystals—and globules of water or other liquids, had the power of apparently enlarging the size of objects too minute to be distinguished in detail by the naked eye. In fact, a plano-convex lens of quartz less than two-tenths of an inch in thickness and one and four-tenths in diameter, with a focal length of four inches, was found by Ledyard in excavating the ruins of Nineveh, and is now in the British Museum. This probably was used as an aid in executing the delicate engraving found on many of the seals and gems of that time, or possibly as a burning glass. For the capacity of lenses to collect and concentrate the heat rays of the sun, and start a fire in dry tinder, was well known to the Greeks and probably to the Egyptians and Mesopotamian people. But all knowledge on the subject, except in connection with the manufacture of spectacles, seems to have perished in Europe with the fall of the Roman Empire; and not until the latter part of the Middle Ages was the art recovered there. In 1590 a spectacle maker of Middleburg, Holland, named Janssen, is said to have constructed the first instrument with two lenses, the object glass and the eye glass. It was nearly six feet long. Later Divini in 1568, Robert Hook in 1675 and Campani in 1686 brought out important modifications, but due to the high aberration of light in passing through lenses of short focal length, their instruments were very unsatisfactory.

It was not until the principle of achromatic lenses was discovered in 1757 that this could be partially overcome by their use in the objective. In 1823 several pair of double lenses was first employed by makers, each consisting of a plano-convex of flint glass of high dispersive power, combined with a double convex of crown glass of low dispersion. This corrected aberration remarkably. Since then, the microscope has been further improved, not only in the matter of lenses, but in focusing devices, the introduction of the cover glass over the objective, the reflecting mirror and the use of a glass made especially for microscopic research.

The **LIGHT** *that* **KILLED**



Giant rockets roared over giant cities



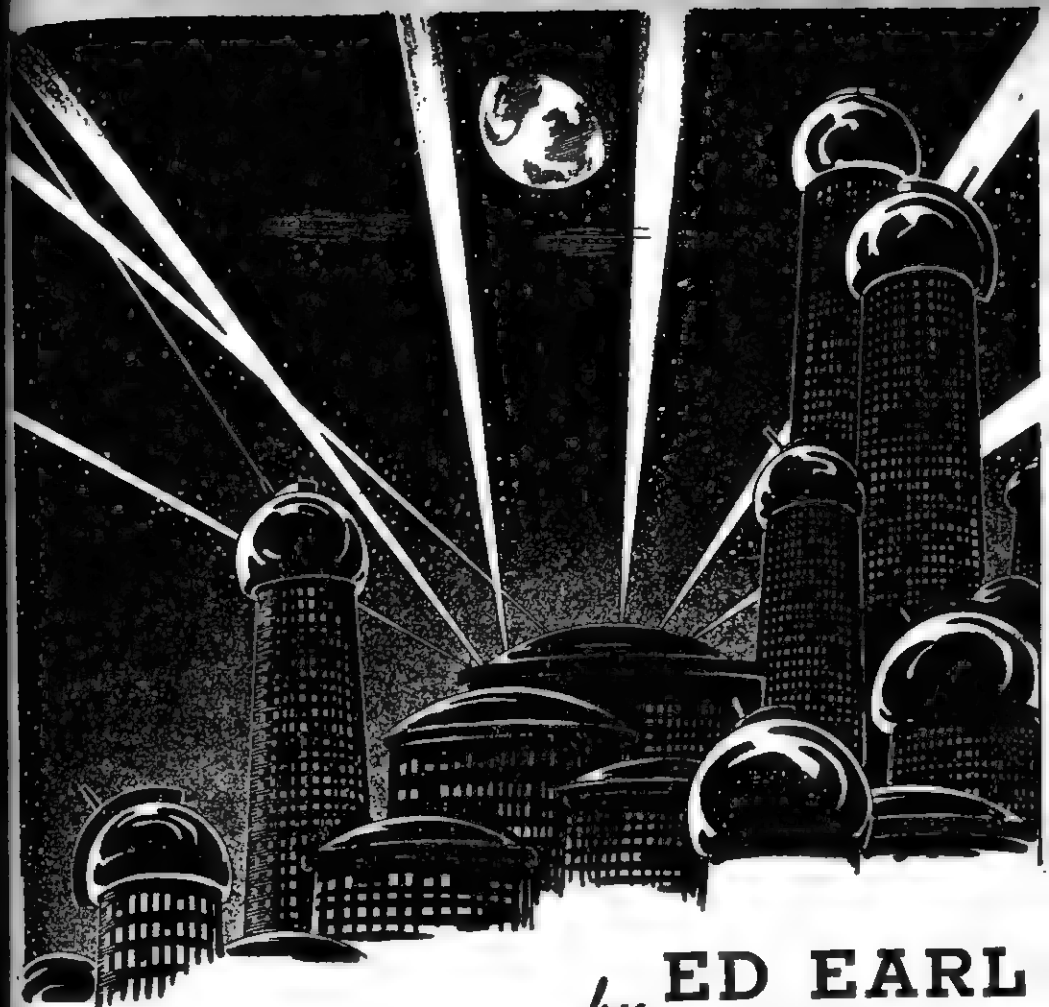
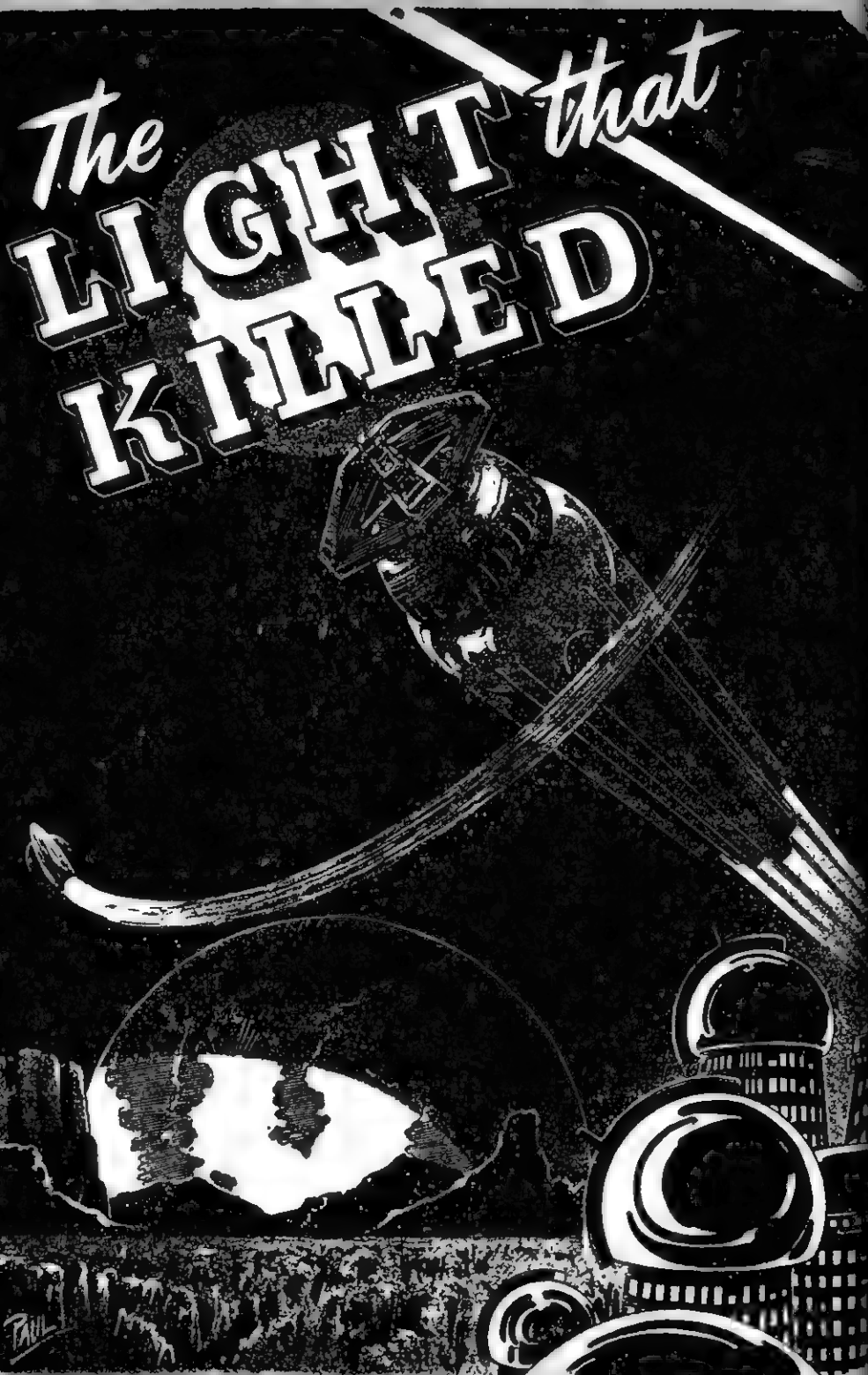
by **ED EARL
REPP**

John Hale, the Laboratory Sleuth, ran into a weird mystery when he tried to find out the secret of this deadly light

LIKE a choking blanket loneliness shrouded the grayed, austere scientist, Dr. John Hale, as the faint cry from the landing field rang in his ears and those of his four grim-faced companions. It meant that within another few short minutes when the three space-liners took off, they would

be the only intelligent, living beings left on the earth.

Impatiently he cracked his knuckles. "Why don't they hurry and leave?" he groaned. "It's all a man can do to keep from running out and going along. Five men left on a world that held billions a year ago! It's enough to



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drive a man mad."

His companions remained silent. The thoughts of every one of them were on the tragedy that was taking place. Eleven months ago a dense fog had wrapped the earth in a thick, freezing mantle, covering the entire planet to a depth of several miles. Attempts by the scientific brains of the world to dispel it had been futile. And during the last few weeks the temperature had dropped five degrees daily. By the thousands, men and women and children had died of cold and starvation.

For three months now, space liners had been leaving daily for the hot, arid plains of Mars where life might possibly be supported for a time. If not, then Hale knew mankind must become wanderers in space, forever seeking a world that would support them.

Today the last of the grim exodus from the earth was taking place.

Detective-Lieutenant Charlie Griffin sighed heavily. He alone was not a scientist, of this little group who had been chosen to remain on the dying planet, to try to dissolve the fog causing Earth's mysterious "death." Because of their long friendship, Hale, the "Laboratory Sleuth," had permitted him to remain.

"Now I know why jail-birds hate solitary confinement," Griffin grunted. "We've got a whole world to roam, but we're no better off than them."

Daguerre, the little French astrophysicist, philosophized resignedly: "It had to be someone, *mes amis*. Someone must stay behind to find out why this accursed coldness is killing Earth!"

Volden, the Norwegian, one of Earth's greatest scientists, sighed. "But it is not easy to see our world migrating to Mars, our warmer neighbor, while we must stay behind. Small hope that we will ever see them again."

"Let's not quit before we've started!"

The forceful tones were those of George Farner, chairman of the Royal College a year ago, before the Great Ice Sheet buried London under forty feet of ice. His strong face held a heavy-browed, blunt look. "For myself, I don't intend ever leaving Earth until we've dissolved this hellish fog blanket. I accept it as a challenge to science. As the allegedly greatest scientists on the planet, it's our duty to fight until we ourselves are frozen into the ice sheet . . . or until we bring normal temperatures back."

John Hale smiled bleakly, his eyes going out over the hills rising sharply behind them. Thick ice covered everything that met his eye. "Spoken like a martyr," he approved. "I've handled a lot of strange cases in my laboratory detective work, but none of them approached this for sheer terrifying importance. I'm still hoping I'll wake up and find I've been sleeping on my back. . . ."

Charlie Griffin seized his arm and pointed. "The signal!" he breathed. "They're leaving!"

UNCONSCIOUSLY, every man tensed forward. Across the field of glistening ice, tiny, red lights had winked on in the stern of each space ship. Their port lights glowed like rows of yellow disks running from bow to rudders. Suddenly those lights went out. All power was being shifted to the electron-repellent rockets for the initial blast.

Then it came—a roar that shook the earth to its bedrock, a blast of wind that forced the watchers back like a hurricane. Momentarily, red light bathed the valley and the mountains going up steeply behind the tower, the lurid glare showering back from the belly of the clouds. And now a great rush of wind sucked through the hole

carved in the mist by the first ship's passing. The ship itself was gone.

Before the howling of it had died away, the second liner left. Again, earth and sky trembled to the passage of one of the largest space craft ever built. Four thousand refugees had now left for a new world. With a final blast, the remaining rocket liner roared into the sky.

There was the howling of wind, the thunderous closing of a vacuum . . . and after that there was silence—

They stood alone on the field, these five who were Earth's last bid for life. Tiny, protoplasmic specks on a great world, motes in the eye of immensity. But they had one possession that made them superior to their gigantic environment—intelligence.

Silence and loneliness came down upon them like the ceiling of a mine on unsuspecting coal miners. John Hale felt ice forming in his stomach. He had never been in a position before where, if he shot a gun, or fired a cannon, there would be no one but his companions to hear it. No one, no matter how far the echoes carried.

Daguerre shuddered, and smashed his gloved hands together. "*Sacre bleu!*" he blurted. "But this unearthly silence—I'm going inside, where a man can shout and hear his echo!"

All of them turned hurriedly and tramped up the icy path to the tower door. Their calked boots crunched harshly on the frozen gravel. When they gained the door, they had to chip away the ice that had formed in the cracks around it since they left it fifteen minutes before. At sixty below zero Fahrenheit, strange things happened.

In single file they wound up the circular stairway. John Hale came last. His thoughts were somber as he came. He was thinking that of all the strange

cases he had worked on in his years of scientific detective work, this was the most baffling. The hopelessness of it was water in his blood.

Yet he knew he must fight on with the others. America had chosen him from among all her scientists to stay here and break the secret of the dying world. He had been chosen from the scientific world because of the brilliant, photographic mind he possessed.

"The test tube cop," newspapers sometimes called him, when reporting one of his cases. Though the term grated on Hale's sensibilities, it was an apt one. He had been called upon—at his customary fee of five thousand dollars—to find everything but the universal solvent, to trap killers and even to dispel a "ghost" that walked through crowds without being seen . . . leaving only its picture on a strip of film as a horrifying clue.

Hale's mind was an endless card-index crammed full of facts gathered from books and people. Behind his lanky, high-shouldered exterior was the keenest brain in America. Consequently, though others had won greater recognition for single achievements, the world of science was unanimous in asking him to be one of those who stayed behind. Lesser brains could solve the problems encountered in colonizing Mars. And John Hale had "taken the case," knowing it might mean his death by freezing.

Ascending through five floors crammed with scientific paraphernalia, they finally won the conference room, in the glass-enclosed tower above the lighthouse-like structure. There they sat down. Hale nursed his big cigar and drew figures on a pad.

AFTER a long silence, Farner, the big Briton, grunted: "I daresay this is as good a time as any to lay our

cards on the table and go to work. You've all got theories and we'll want to hear 'em. Here's mine. . . ."

He started scowling, and his fingers went to tracing on the scratch pad. In his absent-minded way, he wrote in flowing cursive letters, "here's mine." Still adding flourishes, he started talking.

"What I've got to say isn't very encouraging, I'm afraid. To begin with, let me point out the resemblance between the present catastrophe and the Glacial Ages. Lakes and streams frozen solid, half the earth's surface covered with ice, storms constantly, incessant fogs that keep us from ever seeing more than a mile or two above the ground.

"Well, what's causing it? What caused the former Ice Ages? The Earth's cooling? I say it was not, despite other theories to the affirmative. Some of the first Glacial Epochs were the most severe. Does your "cooling earth theory explain that?" His shaggy brows lifted, released a piercing glance at Hale.

The Laboratory Sleuth frowned. "Go on," he invited.

Farner scribbled, "Go on." Abruptly, he leaned back to stare at them all. "I'll tell you what's causing the present Ice Age!" he stated. "A cosmic cloud! The same cloud we've been in for millions of years, ever since the first one cut off enough of the solar radiation to freeze half the earth! But those other times we were just passing through more or less dense wisps of spatial vapor. Now, gentlemen, we are in the main body of the cloud itself!"

"A pleasant prospect, indeed," Volden growled, pulling at his stringy yellow mustache. "What does that mean—exactly?"

"That we're doomed to extinction

here on earth," was the unhesitating reply. "We can fight it with every weapon we have. But my opinion is that we are beaten already." A quick smile lifted the corners of his mouth. "Well, that's my frank opinion. What's yours, Daguerre?" His pencil wrote, "What's yours?"

The little Frenchman turned a pencil precisely between the thumb and forefinger of each hand. "Sun-spots," he murmured. "The old, old theory, my friends. But I had observed some unusually large ones some months before the catastrophe began. They may be the trouble. Just how—*qui sait?*"

"Sun-spots!" scoffed Volden. "I say it's merely a dark nebula we're passing through. Wait a few months, maybe years, and it'll be over. Passive resistance is the only suggestion I have to offer."

Charlie Griffin glanced at the Laboratory Sleuth as silence came into the room. There was something of the sublime confidence of a dog in his master in the gaze he fixed on Hale's owlish face. He knew from experience that the large blue eyes behind those thick pince-nez glasses were seeing things they were blind to. He knew that when his friend chose to speak he would have something definite to say—something more than theory.

Before Hale spoke, he reached down to lift a black surgeon's back to the table in front of him. While his long, white fingers groped through the maze of unique instruments he used in his work, he darted a look at each of the scientists.

"I've got a theory too," he announced in his high-pitched voice. "Before I tell you what it is, let me say this: I think you're all groping in the dark, and I think you know it too. Sun-spots—cosmic clouds—what do they have to do with fogs like we know? Nothing!

So let's stop blaming our trouble on extra-earthly agencies, and face facts."

He was holding a strange piece of apparatus resembling an old-fashioned stereopticon, now. Glorified binoculars, they might have been called. With his fingers making deft adjustments, he continued to speak.

"The facts are these: Science has gone about its investigating in a very blundering fashion, one it might well be ashamed of. We wanted to find out what the fog was composed of, so we sent a rocket ship up a few thousand feet and got a sample of the stuff. It was pure water vapor. Then we wanted to discover how deep the fog was, so another ship went up four or five miles and, finding the mist went up still farther, the pilot let it go at that. But, gentlemen, why didn't somebody think of taking a sample of the atmosphere up there? Didn't it occur to anybody that to wrap the Earth in a blanket of vapor ten miles or more thick, *would drain every ocean and lake in existence?*"

CHAPTER II

Invaders from Space

FARNER was first to recover his speech. "Damn it all, you're right, Hale!" he blurted. "But if it isn't ordinary fog—and our tests showed it was—what the devil is it?"

"Come here," John Hale clipped, and went to a movable portion of the glass dome. He slid it down and shivered as a breath of freezing night air clutched at him.

He handed the instrument in his hands to Farner. "You kow how to read a spectroscope," he muttered. "Read that one."

The Englishman scowled through the eyepieces. Abruptly, he yanked them

down. Hale hurriedly shut the window, before the room could become sub-zero in temperature.

"Yttrium!" Farner gasped. "Why—it's not possible! Yttrium is one of the rarest of rare-earth metals. Are you trying to tell us the fog is *metallic?*"

Hale nodded. "Ionized yttrium, is my guess. How it happened, why it happened, I won't even guess. The water vapor is merely the ordinary cloud layer, forced down by the lighter, metallic mist, until it forms a thin envelope completely surrounding Earth. But it's these minute atoms of yttrium that are cutting us off from solar light."

Volden strode up, grabbed the spectroscope, and stared into the night sky. His squarish face was white when he returned the instrument. "But this means Earth is being disintegrated!" he gasped. "Some form of electrolytic power is breaking its elements down—"

"Only one of its elements," the Laboratory Sleuth corrected. "Otherwise, we'd all have been decomposed months ago. But you are right; something is breaking this one element down, rendering it lighter than air, and wrapping Earth in the coldest blanket it has ever known!"

Charlie Griffin shivered. His beefy features looked a little sallow. "So what are we goin' to do, Doc?" he asked hoarsely.

"Fight it," Hale rapped. "Find a way to combine these atoms with other atoms and thereby precipitate them as heavy dust. If we fail . . . well, perhaps mankind will get used to Mars in time."

Daguerre grinned, a feeble quirk of the lips that carried a sickly chuckle with it. "Perhaps the gods are angry with the Solar System," he suggested, more than a little in earnest. "Only a year ago the inhabitants of Jupiter learned that a stellar fragment would

soon destroy their world. Where are they now, wandering about in space seeking a world they can live on?"

"Serves them right," Farner growled. "We offered Arra Tahl, their ruler, a million square miles of our Arctic lands to colonize. Cold as their world is, one would think Alaska and Greenland would suit them perfectly. But, no—they hope to find a new world somewhere."

John Hale stiffened. A roaring filled his ears. His mind was plunging at top speed, like an intricate machine sorting, filing, and rejecting cards at one operation. Slowly, he turned to look down on the frozen world. For the first time, he noticed the curious resemblance between this vista of ice-covered mountains and the glaciers of Jupiter. Suspicion was born in him in that moment.

But George Farner interrupted his thoughts. "Well, there's not much to be done tonight. I'm going to crawl into my electric blankets and try to sleep. Good night, all."

The idea caught on. Suddenly realizing how weary they were, the scientists descended to their sleeping quarters. But John Hale sat long before the council table, making meaningless marks on a scratch pad, and smoking cigars until the air was blue. Over in the corner, Charlie Griffin sat shivering in his chair, snoring softly in a troubled sleep. His rhythmic snoring had a somnolent effect on the test tube cop. Soon the glass dome gave back the breathing of two exhausted men in deep sleep.

THE cold, gray light of morning was in the room when Hale awoke with a start. Every nerve in his body quivered. He was stiff and cold from sleeping in the chair, in this bare room. Yet for a long time he could not guess

what had awakened him.

A husky voice from the corner told that Griffin was awake too. "What was that, Doc?" he was asking tensely. "Sounded like—"

Breaking into his words, it came again. A far-off roar that made the glass in the windows vibrate. Another and another explosion came to their ears. Both men leaped to their feet and stared upward.

Through the mist they saw something shoot past the tower. Another and another object hurtled by, until three silvery shapes had streaked through the sky. Charlie croaked, "Son-of-a-gun, Doc—it's the ships back again!"

Feet came pounding up the steps. Into the room burst Volden, Daguerre, and Farner, in various states of dress.

"What the devil!" Farner blurted. "Sounded like spaceships!"

Hale was listening intently, his head turned on the side. After a moment he announced, "Those weren't Earth ships. I could see flame streaking out the back of them. Our liners all use the flameless electron-repellent rockets. Let's follow them in our ten-passenger job. I think we've got visitors!"

It was no trick to trace the unknown ships to their landing place, for a heavy trail of black smoke was settling through the fog to lie darkly against the ground. Hale was at the controls, sending the little craft hurtling over the frozen terrain. Below them was a weird scene, utterly foreign to Southern California.

Trees glittered like crystal *objets d'art*, their branches wrapped thickly in ice. They passed blocks of residences covered by six feet of hard, blue ice. What power lines were still standing resembled silver threads spun from shining needles.

The hills and arroyos fell behind.

They roared out over a great valley sloping down from the hills, then up to a blue range twenty miles away. Without warning, Hale sent the small craft straight up.

"Down below!" he shouted above the blast of the rockets. "They've stopped right on the bank of the river."

They crowded the ports as he tipped the ship over and dropped down in a breath-taking dive. The peanut-sized silver bullets on the bank of the Los Angeles River materialized into gigantic space liners. Their passengers were pouring out upon the flat space between the river and the Santa Monica Mountains two hundred yards south.

Charlie's eyes widened as he continued to stare. "Am I dreaming?" he chattered. "Ain't that the big flagship Arra Tahl always flew when he visited Earth? If I'm not lookin' at the Jovian Royal Triangle, I'm the south end of a horse!"

The foreign scientists gaped, then sank back in surprise. "*Nom d'un nom!*" Daguerre piped. "It's the Tahl's ship! But, what brings him here, when he left the Solar System months ago?"

That question was in every mind, as John Hale sat the ship down in the midst of the swarming Jovians. But in the Laboratory Sleuth's mind was a growing certainty, that the suspicion he had had last night was correct . . .

THEY stepped into the bitter cold, silently watching the Yalkans, the lowest class of Jovians, laboriously carrying great boxes from the yawning loading hatches. The cruel, arrogant Nomars, members of the ruling class, kept watch over them with flexible black rods whose touch transmitted a staggering electric shock, and frequently caused death. Work seemed to go on as though the Earthlings were unnoticed; then Hale saw the group of

Jovians approaching from the right.

Immediately he stepped forward. He raised both hands in the Jovian greeting. He thanked his stars he had taken the trouble to learn their strange, explosive language during a trip there.

"Vokar!" he exclaimed in surprise, as he recognized the Tahl's lieutenant. "You have come to a sad world, my friend. But what brings you here, when it was decided long ago that you must leave the Solar System?"

The Jovian stopped a few feet away. He, like his eight companions, was a tremendously powerful, extremely ugly man. Seven feet in height, he had a massive frame bulging with muscles which had been necessary on a world having many times the gravity of Earth. He wore only a light shirt, and short, thin breeches, despite the cold that stiffened every joint of the scientists' bodies. His skin was yellow; his face broad and flat, with large black eyes and a snout-like nose.

An ugly smile bent his thick lips. "We heard of your trouble," he shrugged. "We came to help."

Farner, in his blunt way, snorted, as Hale explained to them what had been said. "Generous of them," he scoffed. "Ask him why they waited until Earth was deserted!"

Vokar flashed an angry glance at the Englishman. "Arra Tahl will explain that to you," he snapped. "Come along. The Tahl will be glad to meet such an ungrateful one and explain to him—in his own way!"

Farner's eyes went wide. He had not dreamed the Jovian spoke English; nor had Hale, who knew he spoke only his own tongue a year ago. But the harm was done now. The scientist's words had opened a breach between them.

Vokar gave an order, and the others fell into a double line, inside which

the Tahl's lieutenant invited them curtly. It was unpleasantly like being marched within a firing squad, Hale thought glumly. They were taken to the largest ship and ordered up the gangway.

Luxury was the order of the day within the space liner. Hale thought instantly of a Roman palace. They were within a long chamber, at the far end of which was a circular alcove. Within the alcove, among a dozen not unattractive women, Arra Tahl held forth. Strange statues, done in red marble, formed an aisle leading up to the ruler's alcove. The floor was a mosaic of rare metals, the walls and ceiling were of colored plastics which glowed softly with the light behind it. But though there was magnificence here, there was a blatant lack of taste.

Before the Tahl's throne they were lined up. "Earthlings, your Majesty," Vokar announced with relish. "The last on the planet—"

The giant ruler thrust back the women who sat beside him and stood up. Not long ago Hale had thought the sub-ruler was large, but now he had to revise his ideas of size and strength. Arra Tahl was a foot taller than his lieutenant, built on brutal proportions. Scars on his head and face showed that he had had to fight for his position on Jupiter. He was a creature born to fighting and absolute power.

"The last Earthlings!" he repeated gutturally, in stumbling English. "You have done well, Vokar. Well to drive the others away, well to bring these men here."

"Drive the others away!" Charlie Griffin echoed. His blocky, strong features went slack.

It was suddenly silent in the chamber, but from beyond the door came the roar of another fleet of space liners landing.

"You mean—you caused Earth to freeze?" Farner shot at Vokar.

Arra Tahl stared, then grinned amusedly, "You didn't know? You thought it was a cosmic cloud or some such thing causing the trouble? Vokar, you hear—they didn't even guess!"

He threw back his great head and laughed. Vokar joined in, the women screamed ecstatically, and the slaves standing nearby ventured to laugh too.

Arra Tahl gestured for silence. He stalked forward and laid his great hand on the test tube cop's shoulder. "Fools!" he snorted derisively. "For two years we have been planning to steal your world. And now—now it is done!"

CHAPTER III

Death from the Air

INSTINCTIVELY, Hale shrank from the giant's touch. An evil aura seemed to emanate from him. He stiffened his backbone and tipped his face up to the Tahl's.

"If it would make you any less jubilant," he drawled, "I'll tell you that I have suspected you of having a hand in this for some time. Unfortunately, I thought of it too late. Just what means did you use to become the greatest scoundrel in history?"

The Jovian smiled, gazing scornfully down at the smaller man. "Something extremely simple," he returned. "Out there, and out there—" he extended both arms straight out, "lie two ships just within the pull of your gravity. They have been with you for a year, now. Each ship is exerting a terrific pull on a certain element in your world's crust. By a process similar to ionization, this metal has been raised in a sort of fog. Thus the sunlight has been cut off. The temperature of Earth

consequently was reduced one hundred and twenty degrees. Thus, it has been made habitable for my people."

"And how about our people?" It was Charlie Griffin who snapped the question, bristling to the Tahl like a terrier to a mastiff. The cop's jaw stuck out an inch farther than usual.

"Your people?" Arra Tahl asked lazily. "I am not concerned with them. Suffice it that—" His words ended in a sound midway between a grunt and a snarl.

Charlie Griffin had sprung forward, crashing a fist into the Jovian's mouth. Yellowish blood spurted from the crushed lips. Guards came running swiftly, with their electric rods at ready. But the detective stood there oblivious to them, throwing fists at the retreating figure of the ruler.

Taken by surprise, the giant let himself be pummelled back six feet before he raised his hands and warded off the savage attack. Charlie kept on wading in, oblivious to the Laboratory Sleuth's pleas. Then the shadow of an oncoming guard fell across him.

He whirled, just as the tip of a black rod pressed into the nape of his neck. Without a sound, he stiffened and then fell senseless to the floor.

John Hale would have sprung to his side, but at that moment Arra Tahl shouted an order in his native tongue that brough guards in a circle about them. White-faced, he heard a death sentence pronounced upon them.

"Enough of this! Take them and this other creature and put them in a robot ship. Tie them to their seats. We'll have some fun, killing these last Earthlings!"

UNTIL the last minute, they did not know what was in store for them. The Tahl himself decided to take charge of roping them to their

places. Strong, metal cords sank deeply into their muscles as he lashed them firmly. Hale knew a sudden pride for his companions. Not a man had broken down during the terrifying ordeal. Farner was openly contemptuous of anything Jupiter had to offer in the way of torture. Daguerre glared malevolently at their captors, while Volden slumped in his seat and swore softly to himself.

Charlie Griffin came to while the Tahl was binding him to the chair-back. "Boy, how I'd like to get you alone some time, you overgrown larcenist!" he snarled. "Where I come from, we lick your kind just to keep in shape!"

Ignoring him, Arra Tahl stepped back out of the small ship. "May you enjoy your last trip!" he charged. "It will be a thrilling ride, I promise you that. For I myself shall be at the remote control switchboard, while you enjoy all the thrills I must deny myself!"

The door clanged shut, cutting him off from their view. But still in John Hale's mind, as they felt the ship tremble, was the cruel, yellow visage. He knew what was in store. A breath-taking climb, then a drop from thousands of feet to the frozen ground; and after that . . . oblivion.

A shock ran through the small rocket ship as the tubes belched flame. Hale's senses swam. His chest seemed pressing against his backbone. He had only a brief glimpse of the river, falling rapidly away; and then black clouds swirled about them.

"May I congratulate you, Doctor," George Farner offered. "You were quite right. It wasn't a cosmic cloud, a nebula, nor sun-spots. Only I wish to heaven we'd known the truth sooner!"

"*Eh, bien*, we must go some time, my frien's," Daguerre philosophized.

"This way is quick, probably painless."

"But dammit, I don't want to die!" Griffin swore. "I want to get one more crack at that yellow-faced babboon before they shovel me under. Doc, do you think there's any way we can get out of these ropes?"

Dr. John Hale was staring fixedly at the controls. "I was wondering that same thing, Charlie," he mused. "By the altimeter, I see we've climbed fifty thousand feet. If anything's to be done, it must be soon."

The rockets roared on. The altimeter needle pushed farther across the dial. Gradually, their speed began to slacken. The accelerator lever eased back, as a yellow hand ten miles below performed the same action. Various controls shuttled about. They felt themselves twisting over into a dive.

Sweat burst through the pores of John Hale's face. In the seat behind him, Charlie Griffin grunted savagely. Suddenly Hale's voice knifed the roar of the rockets.

"Charlie! Look—can you reach those metal cords I'm tied with with your feet? Where they cross the back of the seat, I mean—?"

Hope kindled in the tiny cabin like a bright flame. The test tube cop felt a solid kick against the back of the chair.

"Yeah, I can reach 'em; but what's the use? I can't kick them off over your head."

"No, but maybe you can cut them with the calks on your shoes!" Hale rasped. "If they'll cut ice on the ground, they may shred the rope in time. Try it!"

Charlie chuckled, "Okay, Doc!" His powerful legs flexed and lashed out. Like a man riding an imaginary bicycle, he commenced a rhythmic motion with his feet. Every eye except Hale's was on the slender cords.

Through the thick metal walls could be heard the rising scream of wind. Hale's heart pounded with every thousand feet more the needle backed across. He hurled himself against his bonds, muscles straining. Tension rose like the stretching of a frayed rope.

Then: "*Doc! It's breakin'!*" came Charlie's triumphant shout.

"Then keep it up!" Hale roared. "The altimeter shows twelve thousand feet—" He hurled his entire weight against the ropes. His face glistened with sweat. Suddenly he was flying forward. The ropes had parted!

Six thousand feet! Hale pounced on the bow rocket buttons and got every one pressed in to its fullest. The ship groaned, seemed to twist about. The rudder guns blazed and hurled the tiny craft down in the rear end. Gravity leaped upon the passengers, forcing them into their seats until blood spurted from the noses of those in the rear.

An involuntary shout was wrenched from Hale's lips as the ship shot through the cloud banks and into the clear. Three hundred feet more! Charlie Griffin closed his eyes as the coveys of Jovian liners swept up to smash them. John Hale pulled the accelerator back against his chest. The blast of rockets was terrible. The ship slewed around terrifyingly.

Dizziness swept over every man. Within a matter of seconds, the cabin was occupied by five unconscious men. Blood streamed from their noses. But at the controls, the Laboratory Sleuth still held the ship in a vertical climb. The craft skidded backwards until its stern rockets were spitting fire against the ice-covered ground. Then miraculously, it sprang back into the sky!

John Hale came to when the altimeter showed sixty thousand feet. He

found the power to level the ship off and head back for the tower. A great gratitude glowed in him. Far behind, he could hear the roar of pursuit ships searching the fog for them. After a while, those sounds dropped behind. Unharméd, they reached the tower and landed near it.

Five men who had goné through hell, they staggered into its warm sanctuary.

CHAPTER IV

City of Doom

WHEN all had eaten and rested, they reassembled in the conference room. Hale felt the impact of their eyes as they sat silently around the table. Volden finally aired what was in every mind.

"Well, what now, Hale?" he said huskily. "We're living on borrowed time. They'll find us sooner or later. How are we going to stop them?"

"By melting the fog," Hale said resolutely. "How—I don't know. But this much is certain; the five of us have the future of Earth on our shoulders. The things we do or don't do in the next few days will determine whether mankind is to return or become wanderers of space."

"But what *can* we do?" Farner grunted. "The 'pole-ships' the Tahl mentioned will be guarded so that we alone couldn't possibly drive them off. Even if we could find them in a billion cubic miles of ether! Yet as long as they are in position, Earth will continue to grow colder."

"Then we must find a temporary means of returning normalcy," Hale frowned. "After that, we will radio the ships to return. A fleet could soon find and destroy the ships that are causing this. Our problem will be

to find something that will render the yttrium particles heavy enough to sink back to the ground."

"Such as a heavily charged molecule of another substance, that would instantly fuse with the yttrium?" Dagherre proposed.

"Exactly. We could do that in the laboratory right now, on a small scale. But remember we're fighting something unbelievably large!"

"Wish I could forget!" Charlie Griffin muttered. "But sittin' here ain't going to get a lot done. Let's get to work! I may not know a Bunsen burner from a Roman candle, but I can do the things that call for somebody long on brawn."

His restless ambition and good humor was infectious. Excited and ready for anything, they crowded down the stairs and into the laboratories. There was a completely modern, fully equipped laboratory for each man. Someone wise in the ways of men of genius had foreseen the inevitable quarrels that would arise if all four had to labor in a single room.

Some of that eagerness wore off in the three days that crept by. Cold, gray days they were, days of discouragement and failure. The thermometer outside the tower clung to seventy-five degrees below Zero during the nights. At intervals, freak storms would buffet the stone tower, forcing icy draughts through tiny chinks and causing the room temperature to drop alarmingly.

Charlie made three cautious trips out in the little pursuit ship. He came rushing back one day with the news that Arra Tahl had moved the entire colony of approximately ten thousand Jovians into Los Angeles. Ice had been hacked away from the streets by the Yalkans, and the triumphant, arrogant Nomar class took possession of

the city. The Tahl himself had been sighted by the detective as he proceeded majestically into the palatial Science Arts Building, the finest in Los Angeles. It was like a slap in the face to the scientists to think of his holding forth in that semi-sacred structure.

The morning of the fourth day after their escape dawned colder and blacker. A fitful wind whooped about the tower. Windows rattled and chattered to the passing of icy gusts. But there was excitement within the council room, for Dr. John Hale had buzzed them all to assemble immediately.

"It's done!" That was his intense greeting when they hurried into the room. A piece of apparatus like a sphere of zircon resting on a slender rod jutting from a choke-coil lay on the table between his splayed hands. They waited for him to go on, watching as his fingers brushed delicate controls.

"COMMON lead is the substance that will bring life back to Earth," the scientist told them quietly.

Farner's eyes twinkled. "Common lead—and uncommon genius!" he breathed.

"What is it, Doc?" Charlie whispered in awe. "Looks like a fancy crystal set."

"It's an electronic conversion unit," Hale replied. "The sphere itself is filled with lead filings. When certain magnetic and radioactive influences strike the filings, a veritable 'fog' of finely divided lead—highly charged negatively—is sent upward in a cone. It's those particles that fuse with the yttrium."

"You mean—you're telling us it works?" Volden licked his lips, nervously.

A faint smile took hold of John

Hale's lips. "You'd like to see the sun again, wouldn't you?" he taunted. "Well, you're going to!"

He snapped a switch, without warning. From the startled scientists arose a single, delighted cry. Sunlight—real, warm, golden sunlight!—was pouring into the room through the glass roof! It sparkled on metal buckles and rings, glowed on their upturned faces, lighted up the world outside for a hundred yards around.

Then Hale shut it off. Charlie Griffin lowered a face down which genuine tears were streaming. "Doc!" he chided. "The first sunlight we've seen in a year . . . and you turn it off!"

Hale got up, finality in the crispness of his move. "Because Arra Tahl might see it too," he explained softly. "And we aren't ready. Gentlemen, here are my sketches. A copy for each of you. I need fifteen of these conversion units and one special one I'll construct myself. The city must be completely surrounded with them in order to create enough heat to drive the invaders out. The special unit will be a 'binder,' to blend all the other heat-cones into a solid blanket over the city. As the units are finished, Charlie will install them in deserted houses and the like which have power lines available. When the last unit is placed in the Tahl's improvised palace, we will turn on the power. Then we'll see them leave faster than they arrived, or else die like rats in an oven!"

Night and day the little group in the labs worked on the conversion units. Charlie was always there at hand, ready to take out new units, eager to help. The third day after they started, the last one was installed. Hale brought his compact binder unit down to the ground floor. His sallow features showed the strain he had been laboring under. He was

smoking a cigar as he got into his heavy clothes, his tenth since breakfast.

"I guess this is Zero Hour," he grated. "The binder is ready. All I've got to do now is to install it in the Science Arts Building."

"*You* install it!" Griffin repeated. "That's my job. You can stay back here and play with your switches."

Hale shook his head. "There's a job for every man. I'm afraid you couldn't adjust this one after it's wired. You men will let me off on the outskirts of the city, then rush to the four master switches I had you link up between the batteries of units around the city. At exactly twelve o'clock, shove the switches home."

"But you—how will you get clear of the city again?" Farner demanded.

"How has Charlie skinned through the lines all these times?" Hale echoed. "By stealth and boldness. I'll do it the same way."

Charlie protested loudly. "But I ain't gone into the palace itself!" he cried. "That's—that's suicide, Doc! Why the palace, of all places?"

"Because I've got hopes of heating it so quickly the Tahl will be killed before he can leave!" He shook his head wearily, against the other's quick objection. "No arguments, Charlie, There's more than my life or yours at stake. There are two billion souls out in space depending on us. Let's not let them down!"

CHAPTER V

The Light That Killed

IT WAS a weird city that rose all around Dr. John Hale, where he stood across from the Science Arts Building. He had made his way this far over icy roof-tops. A little way

north the City Hall raised a glassy bulk into the cold sky. A mantle of crystal overlaid every building, every street. The Jovians had hacked a trench through the twenty feet of ice that stretched from building front to building front in the streets.

With his heart pounding against his ribs, Hale darted across the street. The street was deserted, except for a knot of soldiers a hundred yards down the way. There were no Jovians in the sumptuous entrance salon of the building, but from beyond it came the sounds of raucous revelry. Hale selected one of the elevators and locked himself inside the glass car within a crystalloid column that rose through the ceiling. He pressed the button marked "Tower."

The car shot upward. Only its blurring speed saved John Hale from detection. He caught swift flashes of Jovians on every floor. Scenes of disgusting debauchery and amusement met his eyes. He clutched the binder unit closer in his arms. Higher and higher rose the car, tighter grew the strain on his nerves. Every level he passed carried a risk of recognition.

Suddenly his heart began pounding wildly. The lights in the building had gone off—and the car was stopping!

In one sickening jolt of understanding, he realized the atomic power plants had momentarily failed. Soon they would switch on, as the trouble was automatically rectified.

The car glided to a halt in pitch darkness. Hale heard angry shouts from nearby. Then light flooded the building once more. But the car did not move! The automatic safety brake had jammed, Hale told himself desperately.

A chorus of excited cries brought the scientist's head swinging around. The starch seemed to leave his spine.

He had gained the tower room as the car found a gradual halt . . . but in the tower room sat Arra Tahl, surrounded by his court—

There was no chance for him to make a move. Vokar had leaped forward, followed by a half-dozen of the yellow monsters. They tore the sliding door back and dragged Hale out. Like a leech, he held onto the box in his arms.

The room was filled with the excited screams of the Tahl's women and the shouting of the men. Vokar shoved the scientist before the ruler.

Arra Tahl's voice blared above all other noises: "Where are they? The rest of them, fool—!"

A contemptuous smile curved Hale's lips. "Far beyond your grasp," he returned. "You have me, but the doom that overhangs you will not be stopped by my death."

The king raised his doubled fists, shook them over Hale's head. His face grew black with anger. "*Where are they!*" he roared again.

Hale kept his silence, betraying none of the turmoil within him.

Vokar leered at the Tahl. "What will be my reward," he inquired craftily, "if I find out what your Majesty desires to know?"

"A dozen slaves—two dozen!" Arra Tahl amended. Then a mocking smile widened his own mouth. "—And death if you fail!"

Vokar's expression did not change. He made a sweeping gesture toward the elevator. "Step into the car, Majesty!" he invited. "In the basement I will show you how quickly this fellow may be persuaded to talk."

JOHN HALE did not perceive what was in the Jovian's mind at first. He ordered a slave into the elevator, when all had been emptied in the

basement, and directed him to raise it a few feet off the floor. Then, to the glistening electrode that rose from the floor directly under the car, he fastened a metal cord. Another was fastened to the bottom of the elevator.

Hale gasped as his feet were lashed to the lower cord. A groan escaped his lips, cut off abruptly as he gritted his teeth. The other rope was hurriedly noosed over his wrists. Then Vokar stepped back.

"Raise the car!" he snapped.

Hale closed his eyes. The cord bit deep into his flesh as he was raised from the floor. Almost instantly a wracking pain came into his joints. He could feel the liaisons of his spine being wrenched apart. His teeth sank deeply into his lower lip, crowding back the agony in his soul.

But over the pain that tore him was a fierce hope that Charlie Griffin and the others would have completed their part of the job and turned on the power. It was already past twelve. Perhaps even without the binder unit the converters would generate enough heat to drive the Jovians from the city.

"Lower!" It was Vokar's voice. His evil countenance loomed up before Hale's eyes. "Ready to tell us?"

Hale laughed in his face, a short, harsh sound. The Jovian stepped back and his hand shot up. "Raise the car again!" he snarled.

The Yalkan at the elevator controls sent it up slowly. Every quarter inch further meant new experiences in agony for the scientist. Sweat poured from his face. He could feel blood running down his arms from torn wrists.

"Ready—" Vokar reached up to seize him by the throat.

Hale was on the point of shaking his head when his eye was caught by a movement down the line of elevators. Over the heads of the shouting Nomars

was slowly descending another car—with infinite, almost imperceptible motion. The test tube cop suddenly seemed to break down.

"Cut me down!" he panted. "I'll—I'll talk. You'll tear me to pieces if I don't! God, my back!"

Arra Tahl pressed forward eagerly. He drew a long dagger and slashed the ankle ropes with one motion, then severed the upper cords. Hale fell to the floor and lay there shaking.

Vokar bent over him. "Where are they?" he roared. "Quickly, Earthman, before—"

His last words ended in a yell of surprise. John Hale had come up from the floor with both fists flying. They caught the giant in the stomach, doubling him up. Then another sweeping blow jarred against his snout-like nose and sent him reeling back. Before the astonished Jovians could stop him, he had sprung through the first line.

Down the room, the elevator Hale had been watching suddenly plummeted to the floor. Screaming yellow men were crushed beneath it. Charlie Griffin, Volden, Daguerre, and George Farner all began shouting at once, where they beckoned the scientist into the car.

Hale reached it in a long dive. Arra Tahl hurled himself at the elevator. It was gone when his massive body sprawled across the open force-shaft.

HALE sat weakly against the wall of the car as it rocketed upward. Charlie stopped it at the first floor.

"No!" Hale croaked. "The tower! I left the binder unit up there. Why didn't you follow my instructions?"

"Did!" Charlie bit out, busy at the controls. "But the converters don't work worth a damn alone. We've got to plug that central one in!"

The shooting car slid to a stop. The

compact little copper box across the room loomed up big in their eyes. Hale staggered to it and carried it to a fixture in the baseboard. No sooner had the brass prongs slipped into the contact holes than a great light came into the room.

No one could speak. They could only stand and gaze out the windows into a city bathed in glorious radiance. They stretched their hands towards the warmth flowing in the window, as men hold their hands out to a glowing hearth. It was not ten seconds later that they began to perspire. It was growing actually *hot* already! The conversion cones acted like magnifying glasses, concentrating heat from a thousand square miles into a few hundred. Charlie tore off his parka and sprang onto the throne platform.

"We're gonna need clubs," he rapped. "This'll do for some." The hardwood throne splintered as he hurled it against the wall. His powerful, stubby fingers ripped off the legs and tossed one to each of the others. He chose one of the ornate arms for himself.

They were ready, when the Tahl and his supporters began spilling from several cars. But the Jovians were not ready for the terrible heat that surrounded the copper box and filled the room. Arra Tahl staggered back, covered his face. Accustomed to temperatures a hundred degrees below Zero, normal heat meant death to him.

Quickly the giant recovered himself. "The box!" he shouted. "Break it—destroy the thing!"

The yellow monsters rolled forward in a solid wave. The Earthman squared off to them. The hopelessness of it was in every mind. But, ten feet away, the Jovians broke in confusion. One of them fell down screaming, his body a mass of blisters.

Arra Tahl, Vokar, and a few others came on, their powerful hands outstretched. Charlie Griffin roared defiance at them. He stepped forward and his roundhouse swing crushed one of the Nomars' heads in. It was the cue for the scientists to spread out and commence battering, chopping, jabbing.

The shrieking horde swarmed about them, but ineffectualness accompanied their efforts. The sunlight that stirred warm blood inside the scientists' veins was a searing furnace-blast to them. All over the room they were falling to the floor. Vokar went down under a fierce attack by Farner and Daguerre.

Arra Tahl suddenly stepped back. His head slowly pivoted in a look that included the whole room. He seemed to sense that it would be like this all over the city; his people dying by the dozen, their bodies bubbling like thick molasses as the volatile gasses in their blood sought escape. Perhaps it was a feeling germane to loyalty that caused him to turn back and rush alone into the ring of battling Earthmen.

John Hale saw him coming, but he was unable either to dodge or stop him. He went down heavily. His companions yelled in excitement as the Jovian crashed through. His great hands were closing on the box!

Simultaneously, they sprang after him. Then it was as though terrific internal forces were unleashed inside the Jovian king. He screamed, twitched spasmodically, while his skin swelled

and burst. He was staggering back from the binder unit. His face was a swollen, shapeless lump of yellow dough. His bleeding hands went up to cover it. At full length he toppled to the floor.

THEY did not remain long in that room of horrible death after the last Jovian had died. They found their way back to the elevator and started silently down.

"For my part," Farner muttered, "I'll be glad to get back to the tower. This won't be a pleasant city for a while—with thousands of bodies in the streets."

"Better to have them dead than alive," Daguerre smiled. "Besides, I should imagine decay would be swift and complete with their type of flesh. By the time the ships return, the city may be clean again."

"Bodies or no bodies," Charlie grunted, "it ain't gonna interfere with my plans. I'm not leavin' this sunlight for a few thousand corpses."

John Hale stared as he noticed for the first time that Charlie had taken off his shirt, shoes and socks and was rolling up his trousers. "What under the sun are you doing?" he demanded.

"You guessed it," the big detective grinned. "I'm going out under the sun, and quick. I'm going to prowl all over the city like this and get the sweetest sunburn that ever touched a man's skin. And believe me, I'm going to enjoy every blistering minute of it!"

NAVIGATION AIDS OF SOLOMON ISLANDS

IN SHARP contrast with the modern methods of navigation that our navy is now using in the Solomon Islands area, are the simple aids used by the primitive natives when they make their long voyages in their war and trading canoes. Some of these spiritual aids are now on exhibition at the Field Museum and though we may laugh at the native's belief in them they nevertheless serve a purpose to the natives. They

consist of grotesque figures carved out of wood to resemble a semi-human. The natives place them on the bow of the canoe, just above the water line, in such a position that they can "see" into and through the water. Since their "eyes" never tire, the image will always be on the lookout for danger and if they see any reefs, rocks, or any other underwater danger they will steer the vessel around them.

IT'S AN INTERESTING WORLD!

By WESLEY ROLAND

ENGLISH CHANNEL COMPARATIVELY NEW

THE famous channel which provides England with a valuable moat for defense is so recent a body of water geologically that it may have been formed only 5,000 years ago, says Prof. Edward Steidle, dean of Pennsylvania State College's school of mineral industries. He states that even now, an elevation of only 120 feet would unite the continent and England again.

The channel was formed near the end of the last great ice age in Europe. Melting ice and retreat of the ice sheet caused sea level to rise, forming the North Sea, Baltic Sea, and the channel which cut England from France.

* * *

THE BIRDS THAT SING

THERE are not less than five billion breeding birds and closer to six billion, according to Roger Tory Peterson, Educational Director of the National Audubon Society, who spent five years studying bird census and after checking over a considerable number of sample counts made during the nesting season attempted to make an estimate.

This count would average about 40 or 50 birds for every human inhabitant. Mr. Peterson declines to call his figure more than a guess. The sample counts are not large enough, or numerous enough, and they leave too many habitat types out of the picture entirely, simply because nobody has ever gone to the trouble of making close counts of the birds in such places as the short-grass plains and mountain heights in the West and the pine barrens and salt marshes of the East.

There is a great variation in population density in American bird populations just as there is in the human census. For example, the flat, heavily cultivated farmlands of Kansas show a relatively low bird population, about one bird to five acres. Yet in the woodlots around the farmhouse there are as many as 20 birds to the acre.

Like human cities bird cities seem to grow up where there is water. The average bird count on wet lands is not far from 9 per acre and the concentration in many favorable watery areas is double that figure.

* * *

WAX FROM COTTON

A FREAK variety of cotton that is green instead of white may supplant the wax now cut off by the overseas supplies.

Scientists of the United States Department of

Agriculture, collaborating with a chemical company interested in waxes are now contemplating the possibilities. The company has several acres of the green-lint cotton growing in South Carolina now, for experimental purposes.

This green variety, known as Arkansas Green Lint, sometimes yields as much as 17% of wax. All cotton contains some wax, but the ordinary varieties grown for fiber contain only about one-half of one percent. The staple of the green cotton spins well, but the wax content is so high that the yarn cannot be dyed unless specially treated.

Therefore, it is deemed wise to grow the cotton principally for the wax. This type of wax is much in demand by manufacturers of polishes for shoes, furniture, floors, and cars.

Under average growing conditions it is estimated a wax yield worth \$20.00 an acre should be possible. The lint remaining after the wax has been extracted is a high-grade cellulose suitable for use in plastics, rayon and similar products. The outlook in this field seems very promising.

* * *

FISH OF MANY NAMES

THE Atlantic salmon bears a multitude of names. At various stages of its life it is called the following: egg, sac fry, advanced fry, fingerling, parr, smolt, grilse, adult salmon and kelt.

* * *

STEEL AUTOS FOR THE FUTURE

THE early part of 1941, while America was still looking for better ways to improve our automobiles, a Dr. Gilbert D. McCann gave an amazing performance at the Westinghouse high voltage laboratory in Trafford, Pennsylvania.

Dr. McCann sat in an automobile with a modern steel body and top while being "struck" with 3,000,000 volts of artificial lightning. This incredible phenomenon was explained in Dr. McCann's own words. "Although the laboratory lightning stroke hit the car just six inches above my head, I was safe from injury because modern steel car bodies are effective shields against lightning."

No difficulty is presented by the rubber tires, for the lightning jumps over them from the metal wheel to the ground. In a real storm, with the road and tires wet, the conduction of the current from the car in this way would be aided.

No serious hazard is presented by the gasoline tank either, for the tank is protected by its position, one that lightning can hardly reach. Its nearest target is usually the top of the car.

BRING BACK

By DAVID WRIGHT O'BRIEN



"And here we have a young man," said the announcer, "who seems anxious to speak"

MY BODY . . .

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I WAS sitting in my office cleaning my fingernails with a pen knife, just like private detectives are supposed to do in all the stories written about them. Cleaning my nails with my feet on my desk—also according to the best authorities on what a private gumshoe does between shooting crooks in alleys and getting drunk—and wondering when in the hell I was going to have a case.

It was all just like the opening of a Dashiell Hammett mystery novel, you see, and should have resulted in at least a beautiful blonde staggering through the door with a knife in her lovely breast.

But being a bit of a realist, I wasn't counting my blondes before they were stabbed. Nor was I even expecting a mysterious note telling me to get out of town. Incidentally, I'd have welcomed such a note if it had carfare enclosed with it.

Actually, my razor-keen mind was dreading the entrance of the office building manager to tell me he couldn't let that back rent go any longer. I was dreading that, and wondering if I'd find my hotel room locked by the management when I returned.

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BRING BACK

By DAVID WRIGHT O'BRIEN



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Now and then I'd glance at the telephone at my elbow. Somehow I'd been

able to keep the bills paid on that, being smart enough to realize that without it I'd be completely sunk—if I wasn't already.

Everytime I'd glance at the phone, of course I'd hope that it would ring. Not real hope, you understand. I was beyond that. Just the sort of hope a person has now and then when he wishes an unknown uncle would die and leave him about fifty thousand smackers.

There was damned little chance it would ring. After all, the name "Kendrick Secret Service" in small type in the telephone book was scarcely a tempting bit of commercial copy designed to lure in customers by the dozens. Especially with the full page telephone book ads all the really big gunshoe agencies carried.

Who'd bother with Mike Kendrick and his jerk, one-man agency when he could get Hargrave, or Pinkerton's, or any of the big detective outfits to smooth out his troubles?

So I sat there, paring my nails because I had nothing better to do, occasionally taking a side glance at the phone on the edge of my desk.

And then the damned thing rang!

So help me—*brrrrrrrring*, *brrrrrrrring*, just like I'd almost forgotten how they ring!

For a minute I just stared at the thing.

Then my heart was down in my stomach doing flip-flops, and my hands were moist and I felt as if I was losing my voice.

I grabbed for it. No fooling around. No being coy. I grabbed for it, bracing myself for the phrase, "We're just testing your wire, sir."

"Hello," I bleated. "Kendrick's Secret Service. Michael Kendrick speaking." My voice ran up and down the scale with stage fright.

There was an instant of silence. An awful instant of silence. Then a voice came into my ear. A frightened voice.

"Do you," asked the voice, "find things?"

I got control of my vocal chords. No bleating this time.

"Find things?" I boomed in hearty reassurance. "Mister, Kendrick's Agency can find anything from a shirt stufd to the Lost Book of the Bible. Sure we can find things. What've you lost?"

"My body," said the voice. "I've lost my body."

"Well, rest assured, sir," I began. And then his words sank in. "What?" I yelled.

"My body," said the voice. "I've lost it. I really think it ran away on purpose."

I SHOULD have hung up then and there. But I was too sick, too thoroughly disgusted, to think.

"And who in the hell are you?" I shouted.

"My name is Devlin, Arthur G. Devlin," said the voice eagerly.

I got even more incensed. Arthur G. Devlin, eh? Why didn't the joker pick Franklin D. Roosevelt while he was at it. Arthur G. Devlin, the town's richest, screwiest young man-with-father's-fortune. Arthur G. Devlin, who had all the money anyone needed and who drank goat's milk and walked around his fifty room mansion in a bedsheet, while he pondered how he could best dispose of the accursed fortune he'd fallen heir to.

"So," I said sweetly off my nut in rage, "you're Arthur G. Devlin, eh? You're the city's millionaire Mahatma, eh?"

"Yes," said the voice, "and I've lost my body."

"That's fine," I snarled. "That's just

too ducky. Come up and see me some time and we'll talk about it."

I slammed the receiver back into the hook so hard I almost broke the thing. Then, still steaming, I grabbed for my hat, got up and stormed for the door.

I was muttering to myself as I waited for the elevator. Muttering and wondering who in the hell the practical joker could be. I had a hunch it was someone in the cigar store crowd downstairs. The call had probably been made right from the booth down there.

Stepping out of the elevator and into the lobby, I had a wild impulse to tear into the cigar store, demand to know who the joker was, and wring him dead with my hands around his neck. But I knew that wouldn't help, and I knew that the hoots and laughter of the crowd in there would be all I'd need to work myself into a seat at the Laughing Academy.

I was mad, sick and disgusted, and brimming over with self woe. There was only one solution to my problems. A drink. I left the office building and went around the corner to the closest bar.

Inside, I was all set to give my order to the barkeep when I remembered to count the change in my pocket. It was all the money I had in the world.

I had sixty-seven cents. Enough for a package of cigarettes and a scotch and soda. Or enough for the cigarettes and five beers. This didn't buck me up a bit. Hell, even in the corniest of private detective novels the gumshoe *always* has enough dough to buy a bottle of twenty year old stuff when he feels low.

"Gimme a beer and a package of cigarettes," I said.

Try lifting your spirits on beer sometime after you've been used to the heavier stuff. Just try it. All told, I had three beers, two cigarettes, and a

blak feeling in my mouth when I walked out of the place.

And twenty cents.

I was beginning to understand why people tried to rob banks, and beginning to speculate as to how you'd go about it.

FOR maybe half an hour I wandered around looking in store windows and finally wound up in front of my office building. I was tired. I wanted to sit down. I still owned a desk and chair upstairs, so up I went.

Opening my office door, I took my usual glance under the mail slot, and got the usual bang out of seeing nothing there. I took off my hat and threw it on the couch. And then, from nowhere, a voice said:

"I hope you didn't mind my waiting for you."

I wheeled around, unconsciously blurting: "Huh?"

"You said to come and see you. You said we'd talk it over," the unseen voice said tremulously. Then it added, as an afterthought, "I'm the man who lost his body."

"What is this?" I bellowed, "another gag?"

I stepped quickly to the wash closet and swung open the door. There was no one inside. I wheeled again, glaring around the office. I was the only one in the office.

There wasn't anyone else present. My eyes told me that. My common sense told me that. Everything told me that—except the voice.

"Naturally, you're startled," it said.

"Naturally," I began. Then: "What in the name of all that is NOT funny, is this?" I screeched.

"I," said the voice with tired patience, "am the man who called. I am Arthur G. Devlin. I have lost my body."

"Where are you?" I demanded.

"Over here. Sitting at the end of the couch."

I looked at the end of the couch from which the voice seemed to come. Then I looked at the other end of the couch. There wasn't a soul on any part of the couch. There still wasn't a visible thing in the office.

"Of course you can't see me," said the tired, patient voice. "That's because I have lost my body."

I found a chair and sat down weakly.

"Look," I muttered hoarsely, "this *has* to be a joke. It's not a funny one as far as I am concerned. But I'll laugh. I'll promise you I'll laugh my fuzzy little ears off if you'll only, *only* admit it's a gag and tell me how you did it. I don't want to lose my sanity."

"Mr. Kendrick," said the voice, "*why* does it have to be a joke? Do you consider yourself to be an intelligent man?"

"Sure I do," I answered. "Intelligent enough to know—"

"Everything about everything?" the voice cut in.

"No," I said. "No. Of course not. I didn't say that. But—"

"Do you know of anyone in history or alive today who knows everything about everything?" the voice demanded, cutting in again.

In spite of the state of my emotions, I found myself arguing with the damned voice.

"No, of course not," I said. "No one knows everything about everything."

"Would you say that in this world there is a tremendous amount of knowledge as yet untapped?" the voice asked.

"Sure," I said. "I'll admit that."

"Does anyone know enough to say I *couldn't* lose my body?" asked the voice.

"No."

"And you are talking to me right now, and I don't seem to have what we humans call a body, do I?"

"That's right," I muttered desperately.

"Then you are not admitting insanity by admitting that I *could* have lost my body, and *am* talking to you right now?" the voice persisted.

I nodded my head in a very weak affirmative.

"Good, then," said the voice. "I beg of you, accept this fact. Through a process of reasoning, your sanity will now allow you to do so, won't it?"

I stood up. "I guess it will," I admitted. "But do you mind if I have a smoke and think this thing over?"

"Take all the time you need," said the voice patiently.

NONE too steadily, I managed to light a cigarette. I took the first drag when a thought popped into my head. I turned to where the bodiless psyche was supposed to be sitting.

"Listen," I said, "didn't you tell me that you are Arthur G. Devlin?"

"I am," said the voice.

"Then," I declared, "if I am going to believe you are a disembodied psyche walking around loose — and it looks like I'll *have* to believe that—I certainly can't get any deeper into this thing by believing that you're Arthur G. Devlin."

"Thank you," said the voice. "I realize that identification is somewhat difficult under the circumstances, but in due time I shall prove to you that I am who I say I am."

I crushed out my cigarette and started pacing. Sure I realized I had just resolved to take all this seriously. Of course I knew that it was more than a little psychologically dangerous to go walking back and forth in your

office talking to a voice that didn't have a body. But it was better than admitting I was going nuts. And besides, if this thing was actually happening, not some loony's nightmare, and this guy, or voice, was Devlin—

"Mr. Devlin," I said, taking a deep breath as I dived in for good, "I'm willing to help you. You can see from now on in I shall not doubt, or question, what has happened or will happen. I'm all for you, and the immediate reconciliation between you and your body. I have accepted you as a client, and I'll see you through this terrible mess." I took another deep breath. "It is my first duty, to work best for your own good, to ask you for a retainer."

There was a moment's hesitation, then the voice said: "Naturally, Mr. Kendrick. However, I could bring no money, of course, being but a psyche. But if you could give me a pen, and a blank check."

I got the pen and the blank check in less than a minute. I put them somewhat gingerly on the desk.

"Think you can manage?" I asked. "I mean, without a body and all?"

"Oh yes," the voice said. "Quite nicely, thank you. Don't be alarmed, however, at the sight of a pen apparently moving without a hand or body to guide it."

In spite of myself, the next scene *was* alarming. The pen rose through sheer air of its own accord, shook for ink, then dipped down to scratch a sum and signature on the check. Then the pen settled down quietly on the desk again.

"There," said the voice. "My bank is still open. You should be able to cash this. Will the amount be sufficient?"

I moved over to the desk and looked at the check. Shades of Perry Mason

—it was made out for one thousand bucks!

"Yeah, sure," I said as casually as I could. "It'll do as a starter. However, if—I mean—I get your body back for you, I'll expect—"

The voice cut me off. "Shall we say another four thousand?"

I caught hold of the edge of the desk to steady myself.

"Yeah," I mumbled. "Yeah, fine."

Glancing down at the signature, I saw that it was that of Arthur G. Devlin, all right. If I were going crazy, it was fun.

"Now," said the voice, business-like, "I expect I'd better begin at the beginning and tell you how this thing happened, hadn't I?"

I folded the check carefully, put it in my utterly vacant wallet, placed the wallet next to my heart, and took a seat.

"Go ahead," I told him, "shoot."

IF YOU know anything of my personal past, Mr. Kendrick," said the voice of Arthur G. Devlin, "you will understand that the press and other unkind and unthinking members of this city have called me an eccentric, a— a screwchain, I think they called me."

"Screwball," I corrected him.

"That's right," the voice agreed. "Nevertheless, ever since my father died and left me his quite considerable fortune and the large mansion that goes with it, I have come much more severely under the attention of the press and consequently the public. It has therefore been very difficult for me to have any private life, and equally hard to avoid the mockery of an ignorant world."

"Uh-huh," I contributed.

"You see," young Devlin's voice went on, "I was always scholastically, academically inclined. I had a fervid

wish for as much knowledge as any man can obtain. My readings, studies, experiments and whatnot at school, and when I came back here after my father's death, were all unusually directed. I experimented, in my search for Truth, with Yogiism, the teachings of the great Confucius, and many others." His voice became recollective. "At one time I even delved into devil worship to see what it was about."

"Just for the hell of it, eh?" I punned.

The voice went on. "My last experiment has been with the truths and teachings of Buddha. From the Great Teacher, I learned to live according to several precepts that brought additional scorn upon my brow from the press and public."

"You mean the goat's milk and bedsheet routine?" I asked.

"Yes," the voice acknowledged a little coldly. "I mean the simple life, the life of contemplation." The voice paused. "I will get more quickly to the point, however. You see, one of the truths expounded by the Great Teacher, is the value of the contemplation of infinity."

"Uh-huh," I broke in, just to give him part of his thousand bucks worth.

"In contemplation of the infinity, an art that is practiced daily by millions of Buddhists over the world, incidentally, one sits on the bare floor, legs crossed beneath him, head bent, and his entire being brought into concentration on one object."

"Like the navel?" I broke in.

The voice of young Devlin was reproving. "I chose to give my being over into all encompassing contemplation of a wart on my chest," it declared. "However, that is neither here nor there. The fact is, that I began to practice this rite of concentration."

"Often?" I asked, for no reason other than curiosity.

"Every day," said Devlin's voice. "Four hours a day."

"I see," I said, and tried to sound *knowing*. "And how did it work out?"

"Fine," said the voice, "at first. For the first week of it I got along splendidly."

"Concentrating on the wart every time?" I asked, as if making a mental note of that.

"Every time," the voice assured me. "But on the seventh day of the week, I surpassed myself, and perhaps surpassed anyone who'd ever attempted infinite contemplation before. I got off into the infinite so utterly, so completely, that I got away from my finite being entirely. I divorced my soul, my psyche, through contemplation of the wart, absolutely from the mere flesh that is my body."

I NODDED, grunting noncommittally, but nevertheless fascinated.

"When my four hour period was ended, I emerged from my contemplation to find that my body had walked out on me while I was off in infinity," the voice said, suddenly sick and frightened again. "*It had left deliberately, I know, for it left a note for me!*"

I almost fell out of my chair at that one.

"It left you a note?" I gagged. "You mean your body not only walked out on you, but it left a note, just like an angry wife?"

I could sense the voice nodding with sad solemnity. "Yes, Mr. Kendrick. Exactly that," it said.

I had a burning flash of inspiration, or common sense.

"Then the note must have said *why* it walked out on you, eh?" I asked.

"Precisely," said the voice. "Of course I do not have the note with me, but I memorized it verbatim. I shall quote it to you, exactly as I read it."

I leaned forward, not even thinking to light a cigarette.

"Go ahead," I begged. "Go right ahead."

"Understand," said the voice, and I detected a bit of embarrassment in it, "I am quoting. Any opinions stated by my body are not necessarily my own, you understand."

"Of course," I agreed, mentally tagging a new one for the books.

"The note said," the voice went on, "precisely this. *'Dear Sap: I am sick and tired of standing for the jackass life you lead. You and your mind—bah! Doesn't it ever occur to you that I'm a young, not-too-bad-looking body with a lot of life and a love of fun? Don't you think I'd like a drink once in a while, like other bodies? Don't you think I get tired of goat's milk? Don't you think I feel damned silly traipsing around in a bedsheet when all the other bodies I know are dressed up fit to kill? Don't you think I'd like to snuggle with a blonde in a taxi? Don't you think I'd like a cigarette, or a swim, or a big, juicy steak dinner? Don't you think I rate as much attention as that damned mind of yours? Don't you think I got feelings?'*" The voice faltered on this, then picked up to the conclusion. "*'Don't you think I'm coming back, either. I wouldn't have you for an owner if you were the last person on earth. So long, dope. Your Body'*." The voice stopped abruptly.

"And that was the note?" I demanded.

"Exactly as it was written," young Devlin's voice said.

Now I lighted a cigarette. I needed it. I took a deep drag and tried to look pontifical.

"That sounds like your body was distinctly fed up with the kicking around you've been giving it," I said.

"But the Great Teacher," the voice began plaintively.

"Nuts to the Great Teacher for a few minutes," I said. "Is your body important enough to you for you to want it back?"

"Oh, my yes!" exclaimed the voice.

"Then the best thing to do is to forget the Great Teacher and physical subjugation or divorcement and all that sort of stuff," I said. "It obviously can't bring back your body, and undeniably was the original cause and final effect which lost you your body."

"I—I never thought of it quite like that," the voice said.

"Well you've got to think of it that way now," I said. "Anyway, if you want to get your body back you have to."

"Do you really think, Mr. Kendrick, that you can get my bo—" the voice began with pathetic eagerness.

I PUT on my best Perry Mason look.

"I can promise nothing definite, Mr. Devlin, except that I'll see my clients through to the end. We will see what we will see. Any idea where your body is now?"

Verbally, the voice shook its head. "No. I haven't. Not the slightest."

"That's not much trouble," I assured him. "I'll find your body, never fear, because I've a hunch it'll be conspicuously out for the fun you've denied it. In the meantime, you go home and lie down, or whatever you do in your present condition, and stay put until I call you. Understand?"

"Yes," said the voice meekly. "Yes, Mr. Kendricks. I will." It paused hesitantly, then added: "When will you call?"

"Just as soon as I locate your body," I said.

"Oh yes, sir," said the voice gratefully.

"And in the meantime," I added, "concentrate on forgetting that mumbo-jumbo you've been filling your noodle with. Throw it in the garbage can!"

"What?"

"Get rid of those ideas you had," I amplified. "You've got to have a complete change of heart, and honest one, in regard to your body, if we're going to get anywhere with getting it back for you."

"Oh, yes, sir," said the voice.

"So long then," I said.

"Goodbye," said the voice.

I looked expectantly at the door for a minute. Nothing happened.

"Are you gone?" I asked aloud.

There wasn't any answer. I got a brief chill. The damned disembodied psyche had probably walked right *through* the door. I took out my wallet and looked inside for the check. It was still there, and the ink hadn't evaporated. I felt better, much better, and looked for my hat. I didn't want to get to the bank too late. . . .

THE check was as good as gold. It was, in fact, even better than that. It was good for ten crisp one hundred dollar bills. More dough than I'd made in eight months with my jerk agency.

I didn't go back to the office. I went right to my hotel. I have a hunch my room had been locked and I'd been spotted for the heave-ho, for the leer on the face of the desk clerk as I sauntered up to get my key was cold poison.

"Got my bill handy?" I asked. Nonchalant. Jaunty. Nick Charles, that was me.

The poisonous leer slid from the clerk's face, and an obsequious smirk took its place. I peeled off a hundred dollar bill from my wad while his eyes bulged, paid up the back rent and enough to cover the end of the week.

"I'm leaving this rat trap then," I told him. "Moving to the Astor, where I can get some service."

Up in my room, I sat down by the telephone, fixed a drink from the bottle, glasses, ice and seltzer I'd ordered sent up, lighted a smoke, and settled back to do business over Mr. Bell's baby.

I called three gumshoes who were employed part time by some of the big agencies. None of them was busy for the evening. It took a little fast talk to convince them I really had the green stuff to pay off, but I hired them for the next eight hours to comb the town for Arthur G. Devlin's body. I didn't say body, of course, I just said A. G. Devlin. At ten bucks a crack that made thirty smackers expenditures. I marked it down on a little tab, thought a minute, added the bottle and seltzer, and wrote underneath, "Initial expenses to be paid by client."

Then I dialed another number. Gloria Allen's. Gloria is a sweet looking blonde hussy who's a free-lance female operative for some pretty big outfits. We'd been friends since we worked in the same Miami gumshoe office away back.

"Look, baby," I told her. "Will you stand by for a job tomorrow for me?"

"Sure, Mike," Gloria agreed. "Just so long as it isn't a divorce mess. I don't do those, you know."

I was slightly indignant to think she figured a divorce plant case was the level I'd hit. But I calmed down because she was a slick little operative, and pal enough not to have questioned my ability to pay.

"I'm not sure if I'll need you, baby," I said. "But stand by, and I'll pay you for the day anyway, even if I don't."

"You don't have to do that, Mike," Gloria protested.

"Skip it, kid," I told her magnani-

mously. "Your uncle Mike has struck it rich. I'm cooking with gas, and I do mean helium."

When I'd hung up, I called Room Service and ordered Lobster Ala Newburg, champagne, and a few other dietary necessities. Hell, after three months of cheeseburgers and soup, wouldn't you?

Then I prepared to settle down for some luxurious relaxing. I'd told my three operatives to call me in my room the minute they found the body, and I had nothing to do but sit back and wait for action . . .

THE telephone rang at ten o'clock.

It was Farrell, one of the gumshoes I'd assigned to the near north side of town. He'd found the body, draped around a bar between two blondes in a clip joint on Rush Street. It was buying drinks for the house, and the management was tabbing up the bill by multiplying the actual numbers of customer there.

I got on the phone the minute Farrell rang off. I called Arthur G. Devlin's home. A butler answered.

"I don't know if the master is in, sir," he said. "I haven't seen him in many hours."

"Ring his private study, or whatever he uses for his *aloneness*," I advised. "Maybe you'll find him there."

There was a pause, a buzzing, a *click*, and the voice came on.

"Hello?"

"This Devlin?" I asked.

"Yes. Mr. Kendrick?"

"We've found your body," I said, "at a north side bistro. It's having a fine time and definitely not wishing you were there."

"Oh!" the voice was elated. Then, as my words sank in. "Oh, my!"

"This is the address," I said, giving it to him. "Can you manage to get

over there inside of twenty minutes?"

"Yes. Yes, I think so," the voice said. "I mean, I'll *have* to, won't I?"

"You bet you will," I answered. "I'll meet you out in front."

Then I hung up and looked around for my hat. I felt very fine. Very fine indeed. I was within a few short hours of another four grand. I thought. . . .

I MUST say that the disembodied psyche of Arthur G. Devlin made good time in getting to the bistro on Rush Street. I had scarcely stepped from a cab in front of the joint, when his voice whispered in my ear.

"Don't be startled, Mr. Kendrick," the voice hissed, "but I'm here."

"Okay, okay" I muttered, so the doorman wouldn't think I was happy-headed, "just follow me along, and don't speak until I tell you to."

I could *feel* Devlin's psyche fall in a little behind and beside me as I walked into the night club. Then I saw Farrell.

The gumshoe was sitting at the end of the bar, morosely sipping a beer. He saw me, clambered from the stool, and came over.

"Where is he?" I asked.

Farrell jerked his thumb to the right.

"In the men's powder room," he said. "Those are the dames he picked up." He pointed to a pair of painted blonde cuties giggling near the center of the bar.

I saw that there were booths which a person had to pass on leaving the men's washroom. Several were vacant.

"Okay, chum," I thanked Farrell. "Drop into my office tomorrow with your expense sheet and I'll pay off."

Farrell nodded, and obviously relieved, left.

I made my way to one of those

booths on the aisle near the washroom. I could still sense the presence of the disembodied Devlin tagging behind.

A waiter came up when I'd settled in the booth. I ordered a couple of scotches, double, and he went away to that never-never land where all waiters kill time when you're waiting for drinks.

"Okay," I said aloud. "Are you still here?"

The voice answered right beside me, and I jumped.

"Yes, I'm here. Are you sure this is the place? I don't see my body anywhere," it said.

"Never mind," I said. "It's here. Wait a minute."

We didn't even have to wait that long. I heard the door of the men's washroom open and a loud, slightly fogged voice singing.

"Hang on," I said. "Here comes your body."

I leaned out of the booth and peered down the hall to the washroom. Sure enough, there came the body of Arthur G. Devlin, weaving ever so slightly and grinning with vague happiness from ear to ear.

I jumped out of the booth and stood squarely in the path of Devlin's approaching body. It was a surprisingly well-knit body, more than the newspaper pictures I'd seen of it had indicated. And not bad looking, either. Tall, wide-shouldered, black hair and regular features, plus a flashing smile that had probably never been used before.

The body blinked at me when it got within a few feet, started to step around me.

"Hey there, Dev," I said. "Don't you recognize me?"

A STALL, of course, but I was counting on the body being plenty

oiled by now.

Devlin's body blinked uncertainly, while an amiable grin crossed its pan.

"Can't say I do," it said.

"We were supposed to have this drink together," I said. "The waiter's bringing it now." I took said body by the arm and steered it boisterously to a seat in my booth. Then I sat down across from it.

"Who're you?" Devlin's body asked amiably.

"A friend of a very good friend of yours with whom you've had a grave misunderstanding," I said, digging right in.

"Whosh that?" the body demanded.

"The mind and personality psyche of your lawful owner, Arthur G. Devlin," I said quickly. "I'm here to act for him. He's sorry he did what he did. He's changing his life completely. From now on he'll think with more consideration about you, old man. In his new resolve, you'll be just as important to him as his mind."

The expression on Devlin's body's face changed completely. The amiable grin was gone. Truculence took its place. Slightly woozy, but definitely stated belligerence.

"Zat so?" the body demanded. "Zat so? Well tell that sap I meant what I said in the note. I wouldn't have him as an owner if he was the last guy on earth!"

"Now look," I said pleadingly. "Think this over. You can't get along forever without him. After all, he's got the mind and all the intangibles. You'll need them sooner or later. Besides, he's reforming!"

"Why?" asked Devlin's body with a belligerent eyebrow arch. "Why should I need him? Getting along fine now, aren't I? Enjoying myself, aren't I? Having fun, aren't I?"

"Yeah, but—" I began.

"Nuts!" glared the body. "Tell him he can never get back in me unless I want him to. An I don't want him to. To hell wish him!"

The body started to rise from the booth in angry departure.

Then the voice sounded shrilly supplicating.

"Please! Listen to reason! I'm sorry for what I did. I'll treat you much, much better, so help me!"

The body paused in mid-rising, glaring wildly around the booth.

"Hah! So the little sneak was here alla long, eh? A trap, eh? To hell wish you both. Remember what I said. He can't get me back unless I wan'im, and I don't wan'im to, see?"

And with that, the body of Arthur G. Devlin took its indignant departure. The small, pathetic moan beside me showed exactly what my client's emotions of the moment were.

"To hell with the drinks," I said dispiritedly. "Let's get out of here. We've definitely lost the first round."

I got up, and followed by the spiritual psyche, or whatever you want to call it, of my client, made for the fresh clean air. Outside, I had the doorman call a taxi. I'd almost forgotten my client until the cab started off. Then the voice spoke from somewhere beside me.

"What on earth can we do next, Mr. Kendrick?" it asked plaintively.

I TRIED to think of an answer that was worth part of the grand I'd already gotten. I rubbed my chin reflectively, like a good gumshoe does in the cinema.

"We've only hit your body with what it doesn't take to," I said. "We obviously approached it from the wrong angle. The memory of bedsheets and goat's milk is apparently still too strong to lick. Our next step should be from

the angle of something your truant body really goes for."

"Such as what, for example?" asked the voice eagerly.

"Blondes," I said, thinking of Gloria Allen, and what a million times cuter she was than the two wenches Devlin's body had picked up in that night club. "Lovely blondes."

"Oh," said the voice. "Oh, my!"

There was a silence. Then something occurred to me.

"Say," I said, "would it be a help to you if I had this cab stop at your address?"

"Oh, yes," said the voice. "A very great help. It's not too easy getting around like this, you know."

I leaned forward, tapped on the glass, and gave the driver the address of Devlin's mansion. He frowned, but changed directions at the next corner. I settled back again. Then the voice piped up.

"You know, Mr. Kendrick," said the disembodied psyche, "what you said in there to my body strikes me as being happily true."

"Huh?" I asked. "What was that? What did I say?"

"You said my body couldn't get along without me and my brain—I mean, my mind. That's perfectly true."

"I don't want to crush your spirits," I declared, "but you've no idea how many million human beings are running around this earth without a brain cell working."

"Oh," said the disembodied psyche. It then subsided into gloomy silence.

It was another five minutes to the Devlin mansion. The cab pulled to a stop.

"Stay at home again tomorrow until I call," I instructed. "Good-night, Devlin."

"I will," the voice answered. "Good-

night and thank you, Mr. Kendrick. I shall keep courage. I have faith in you."

Then I felt that the disembodied psyche of Our Town's screwiest young citizen was gone. I leaned forward and tapped on the glass. The cabbie turned around.

"Drive on to the first address I gave you, chum," I shouted.

He gaped at me as if I were nuts, and I settled back on the cushions, by this time almost ready to agree with him . . .

BEFORE climbing between the sheets back at my hotel, I called Gloria Allen, told her to hop over to the place where the body of Arthur G. Devlin was carousing, and snare it away from the two blondes who had it in tow.

"It won't be hard for you, baby," I told her. "He's wild about women, and you're aces over the haybags he's with now. All I want you to do is make a date with him tomorrow before he heads to wherever he calls home. Make the date for luncheon, if you can, then call me in the morning."

"You flatter me all to pieces, chum," Gloria said. "However, I'll do my best."

Then I was able to drop off to sleep certain in the knowledge that Gloria was on the job, and that come heaven or high water, she'd have a date with the truant physical self of Arthur G. Devlin for tomorrow noon.

That was something, anyway, I told myself. And after half an hour of counting disembodied psyches chasing bodies over a fence, I fell asleep.

My telephone rang at exactly eight o'clock the following morning, waking me up.

I bundled out of bed and grabbed for the telephone, wondering who in the name of all unholy could be calling

me at this hour.

The voice that came to my ear belonged to no one other than Arthur G. Devlin, or at least the disembodied psyche of same.

"Mr. Kendrick?" the voice asked.

"Speaking," I said. "What's on your mind, Devlin? Something come up? Your body wander home tight?"

"No, no nothing like that," said the voice dispiritedly. "It didn't come home at all. I presume it is living at a hotel now, anyway."

"Then what's wrong?" I demanded. "Why the early morning siren?"

"I have been thinking," the voice began tragically.

"I told you not to!" I cut in. "You've done too much of that already. It's responsible for the mess you're in now."

"I have been thinking," the voice repeated with firm but beaten weariness, "about the entire tragic affair. I was unable to sleep at all last night, through thinking about it, and I have resolved not to trouble you nor anyone else with my problem any longer."

"What?" I demanded. I had a horrible vision. The vision of four thousand bananas vanishing into thin air.

"I have decided to go away, far away. I have decided to give up this futile struggle to recapture my body. It wants none of me, and I feel I shall never again own it. I have decided not to struggle any longer, Mr. Kendrick. I shall let my body go on as it pleases, while I take myself off to unknown lands."

"Now listen," I said frantically, "don't talk that way. That's nothing more than sheer defeatism!"

"Perhaps so," said the disembodied psyche of Arthur G. Devlin, "but didn't the Great Teacher, Buddha, say that in defeat and resignation to one's destiny lies the only true—"

"Hey!" I broke in. "Tie a can to

that stuff! Forget the Great Teacher, can't you? Didn't you promise to get the right mental angle on all this?"

"I did," said the voice wearily, "only to be spurned by my own body. It will never believe me. So why should I strugg—"

"Look," I cut in again frenziedly, "give it a little more consideration than that, won't you? After all, you've only given me one crack at the problem."

THERE was a moment of reflection on this. Then the voice came through again.

"I had made up my mind to leave this morning, Mr. Kendrick, to go away forever. But I will make one small concession to your arguments, even though I feel I am right in thinking we cannot succeed. I shall not leave until six o'clock this evening. But if we still have not succeeded, I will follow the logic of the Great Teacher and vanish, leaving the triumph to my body."

"But listen," I almost shouted, "just until six tonight isn't any time at all. Be reasonable!"

The voice sighed. "That is as reasonable as I can be. I shall stay here waiting for a call from you throughout the day. But if by six, we are still unsuccessful, I shall leave forever."

"Now, Devlin—" I began.

A *click* told me that my disembodied client had hung up.

I felt sick. Terribly sick. Four thousand berries—*poof*, like that! I sat down on the edge of the bed, hating Buddha as he has never been hated before.

Then the telephone rang again.

I picked up the cradle phone, and Gloria Allen's voice came to my ears.

"Good morning, Sunshine!" she sang.

"What's good about it?" I demanded.

"Everything is good about it if you ask that young Arthur G. Devlin rogue you sicked me onto," she answered.

"Huh?" I demanded.

"I snared him from those other blondes last night," Gloria said, "and got stuck with him from night club to night club until two. Then I shook him, hinting coyly at a luncheon date for today."

"Did he nibble?" I demanded.

"Nibble?" Gloria giggled. "He insisted that it be both breakfast and luncheon. He just called from the lobby of my hotel downstairs to remind me he's waiting for toast and coffee in the main dining-room. He also says not to forget the luncheon. I don't think he went to bed. Sounds as if he's still half tight. I'm getting ready to go down and meet him now."

"Well," I said. "Well. I must say you work well, baby. What do you think of him?"

"Kinda cute," said Gloria. "Not at all like the stuff you read about him in the papers."

"I could explain the reason for that," I told her, "but it would take too long."

"I wouldn't believe you anyway," she laughed.

"Baby," I said, "you aren't kidding."

"Well, after breakfast, what'll I do with him?" Gloria asked.

I thought a minute. "Keep him at breakfast for an hour or so if you can," I told her. "Then take him for a walk and bring him back to your hotel bar along about ten o'clock or so. Hang onto him there until I give you a ring."

"Sure thing, chum," Gloria said.

I HUNG up and beat my palm against my brow frenziedly. There being no sleep now, with four grand hanging in the balance and no solution in my mind other than feathers, I began to get dressed. As I did so I turned over

every single angle of the mess I could think of. I jabbed at each angle from every side.

At the end of the frantic brain scraping, I was left with just the same two obvious conclusions I'd had at the start.

The body didn't want the psyche, under any circumstances that I could figure.

And unless the body wanted to admit Devlin's psyche back into it, there was no soap.

Problem: To get the damned body to want to have the damned psyche and mind back in it. Extra grief: To do so before six p. m. today.

Solution: ?

I went downstairs, ate a half-hearted breakfast, grabbed a cab and went over to my office, under the delusion that I might think more clearly there. Two hours pacing back and forth in the narrow confines of my toil cell turned up exactly nothing in the way of bright ideas.

It was almost noon when I stamped out of my office. I stopped downstairs, when it suddenly occurred to me, and telephoned the bar at Gloria's hotel.

"How're you doing, baby?" I asked.

"Fine," she said. "Just fine. He's sobering up a little, believe it or not. I think he's getting a crush on me, chum."

"Let him do both if he wants to," I said. "Only please, for gawdsake, keep him there a little longer, will you?"

"Okay, chum," Gloria said. "Incidentally, he has a tremendous wad of cash on him. I have to make him stop throwing it around in spit balls every half hour or so."

"That's to be expected," I said. "But keep him in hand, and there, will you?"

I hung up then, and went out into the street. Again I was back in the ring wrestling the python-like problems of

Arthur G. Devlin and his disembodied psyche. My head was beginning to ache, and I turned into the nearest tavern.

Scarcely two minutes after I'd ordered my drink, Jerry Stavers came in and took the barstool next to mine. Jerry was WHAL's star on-the-spot announcer. I'd known him for two or three years, hadn't seen him in months.

It was old-chum-where-yuh-been stuff. You know the routine. I bought him a drink, and he bought me one. Then I bought one, and he parried my thrust with another round.

We weren't getting tight, you understand. Just four drinks, with Jerry blabbing away, and me trying to juice up my weary brain cells by thinking about something other than truant bodies and wandering psyches for a little while.

And then Jerry looked at his watch.

"Damn," he said. "It's one-thirty. I have to beat it, Mike. I have to announce a spot show at two."

I nodded, my mind back with Arthur G. Devlin and his troubles, and Mike Kendrick and *his* troubles, at the mention of the time element.

"What kinda show," I asked automatically, "and where is it to be from?"

Jerry was putting on his hat and starting for the door when he casually answered both my questions. For a split second I just stared at him. And then everything clicked. Clicked like it had never clicked before.

"Jerry!" I yelled, jumping from my barstool and grabbing his arm. "Listen, chum, and listen fast. You gotta do me a favor on that show of yours. A tremendous favor!"

And then I told him, repeating it a second time, slowly, emphatically, and finally making it positive with a third repetition.

Jerry was puzzled, and scratched his

head over my wild insistence, but agreed to come through willingly enough. And the minute he left, I turned and dashed into the nearest telephone booth.

I got Gloria on the wire again, from her hotel bar. Frantically, I gave her double barrels of instructions. Making her repeat them to me twice after I'd spied them.

"This is the most important part of the entire job as far as you go, baby," I said. "You've gotta put it over perfectly!"

"I'll do my damndest, Mike," she promised.

My dear disembodied client, the psyche of Arthur G. Devlin, was the recipient of my next call. As I poured forth my instructions he was properly bewildered, but promised to do exactly as I told him. I gave him the name of Gloria's hotel, telling him to meet me in the lobby, which he solemnly pledged to do without fail.

Then, utterly exhausted, I slumped against the side of the telephone booth and said my prayers. I left the booth, stepped to the bar, and had a quick double bourbon. With four grand hanging higher than the proverbial goose, brother, I needed it . . .

IT WAS exactly ten minutes to two when I walked into the lobby of Gloria Allen's hotel. The lobby was fairly well crowded, even for its enormous size, inasmuch as the hotel was directly in the middle of the city's business district.

I loitered by the cigar stand, where I'd told the disembodied psyche of Arthur G. Devlin to meet me. Loitered casually, while I was an eleven alarm fire of excitement and sick suspense inside.

From where I stood I could see the bar entrance which led out into the

lobby. Gloria and the body of Devlin would emerge through there, unless she crossed her wires.

The big clock on the lobby wall said precisely five minutes to two when a voice at my ear said:

"Here I am, Mr. Kendrick. Just as I promised."

It was the voice of the disembodied psyche of Arthur G. Devlin, of course. I didn't have to turn to see that.

"Good," I told him. "No, just stay put and keep cool. Remember this—your body has to want you and your mind back before you can take over again. In the split second when it wants that, you have to act quickly, very quickly. Get me?"

"Yes. I understand. I hope it will work," said the voice tiredly.

"You aren't the only one," I muttered.

Bellhops were clearing a space in one corner of the lobby, and men with electrical equipment and cases and wires were moving things into the space provided.

The clock on the wall said two minutes to two.

It was then that Gloria steered the body of Arthur G. Devlin out the bar door leading to the lobby. She looked around casually, gave me a covert high sign, and moved with the truant body over toward the corner of the lobby where the equipment was being set up.

I saw Jerry Stavers enter the lobby then. He didn't seem to notice me, but went over to the cleared spot where the microphone was now being set up. He looked long and hard at Gloria and the truant body of Arthur G. Devlin as he passed them.

I spoke out of the corner of my mouth to my client.

"Come on, pal. This is it. We'd better mosey over to that crowd around the microphone in the lobby."

"Very well," the voice said.

And so, trailed by my disembodied client, I crossed the lobby until I stood on the fringe of the increasingly large crowd pressing in around the radio sound engineers, the microphone, and smiling announcer-pal Jerry Stavers.

I looked up at the clock on the wall.

Two on the dot!

Then the crowd was hushed by a signal from Jerry, and his locally well-known voice boomed out:

"**WHAL** presents 'Questions To the Crowd,' your city's own citizens' information please, in which your announcer, Jerry Stavers, tests the wits and good humor of folks everywhere around our town. We're broadcasting today from the lobby of the—"

And as Jerry went on, then into his commercial, I took a quick glance over to the left of the crowd around the microphone. There was Gloria, edging Devlin's truant body closer to the mike, while she was obviously saying something similar to:

"Go ahead. It will be fun. I'll bet you're smart. I couldn't stand a man who isn't!"

I grinned, and out of the corner of my mouth, said to my disembodied client, "Now get up next to the microphone and stand by all ready to dive in!"

"All right," said the voice, eagerly now, and I knew my client was whispering through the crowd to the microphone.

THEN Jerry had finished his commercial, and was into his opening glib chatter. I could see him eyeing Gloria covertly as she worked her victim close enough for Jerry suddenly to reach into the crowd, and grab the coat lapels of Devlin's startled body.

"And here we have a young man," Jerry was saying swiftly, drawing Dev-

lin's body closer to the mike, "who seems particularly anxious to answer today's first question to the crowd."

Devlin's body stood there looking trapped, eyes flickering uncomfortably toward the smiling Gloria on the fringe of the crowd.

"What is the most heavily populated country in the world?" Jerry asked Devlin's body.

I could sense Gloria's "I couldn't stand a man who isn't smart," running wildly through the body's recollection. It turned its eyes mutely toward the crowd, then back to smiling Jerry Stavers.

"Uh, would you repeat that question?" the body hedged.

"What is the most populated country in the world?" Jerry repeatedly blandly.

Devlin's body shifted from one foot to the other, glancing in covert shame at the lovely Gloria who stood a little away and was beginning to frown.

And then it happened. The look came into the truant body's eyes. That brief, desperate, frantically appealing look which said one sentence as clearly as if it had been written in them.

"Damn it! I wish I had that mind for just a minute!"

AND in that second, something made Devlin's body shudder from head to toe for an instant. A long, deep, convulsive shudder. The disembodied psyche had dived right in on the heels of that wordless invitation in his body's eyes!

Suddenly, then, as suddenly as it had started, the shudder through the body of Arthur G. Devlin was finished, and Arthur G. Devlin, *completely reunited with himself*, psyche back in control of body, was answering Jerry Stavers' question with amused pity.

"Why, China of course, old man.

Next is India, then Russia. Was that really supposed to be a quiz test?"

The crowd roared its approval, and smiling, Arthur Devlin moved away from the microphone and back into the crowd. Gloria took his arm, and he looked down at her curiously.

I hurried over to the two of them.

"It worked!" I yelped. "It worked! You're back in place again, old boy!" I reached out, took Devlin's hand and pumped it. He smiled and fished into his pocket, bringing out his wallet.

Opening the wallet, the once disembodied Devlin pulled out four thousand dollar bills as casually as an ordinary man might handle cigarette papers.

"You surely fixed it, Kendrick," he said, handing me the bills. "I'll be in to thank you in greater detail tomorrow or the next day."

I was gaping at the bills in my palm.

"Say," Gloria's voice demanded bewilderedly, "what on earth is this all about?"

I started to say something, but Devlin cut me off. He took Gloria by the arm.

"You know, I have a feeling I really don't know you well enough," he said, "even though I've supposedly spent a bit of time with you last night and today."

Gloria's laughter tinkled musically. "You say the darnedest things, Mr. Devlin," she said.

Devlin grinned. Not a bad looking young guy, Devlin.

"I've a feeling I'm way behind myself, however," he said. "I've got some time to make up for."

He slipped his arm around Gloria's waist, and the two of them headed for the bar. Very luscious blonde, Gloria.

I just stood there, *almost* surprised enough to have forgotten the four thousand bucks in my fingers. It was obvious that I was witnessing the exit of one of the sweetest, smartest female operatives in the business. But my professional regret was distinctly soothed by the fat fee I held in my hand.

For even to that big operator, Perry Mason, four thousand cash moola ain't hay!

MIRA, THE "WONDERFUL" STAR

MIRA, known as the "wonderful" star, which is sometimes one of the brightest in the heavens and at other times so faint that a telescope is needed to see it, is really a bubble within a bubble, alternately expanding and contracting. This is the opinion of R. M. Scott, of the Harvard College Observatory.

He explained that the peculiar behavior of the star is due to the double bubble construction. It has been generally accepted that stars of the type known as Cepheid are pulsating, and efforts have been made to explain stars like Mira on the same basis. But trouble started when it was found that calculations of the size of the star from the shifting of the dark lines that appeared in its spectrum differed from those measured by its heat radiation.

According to Mr. Scott, the surface at which the temperature is measured is not the same as that where the absorption of the light, producing

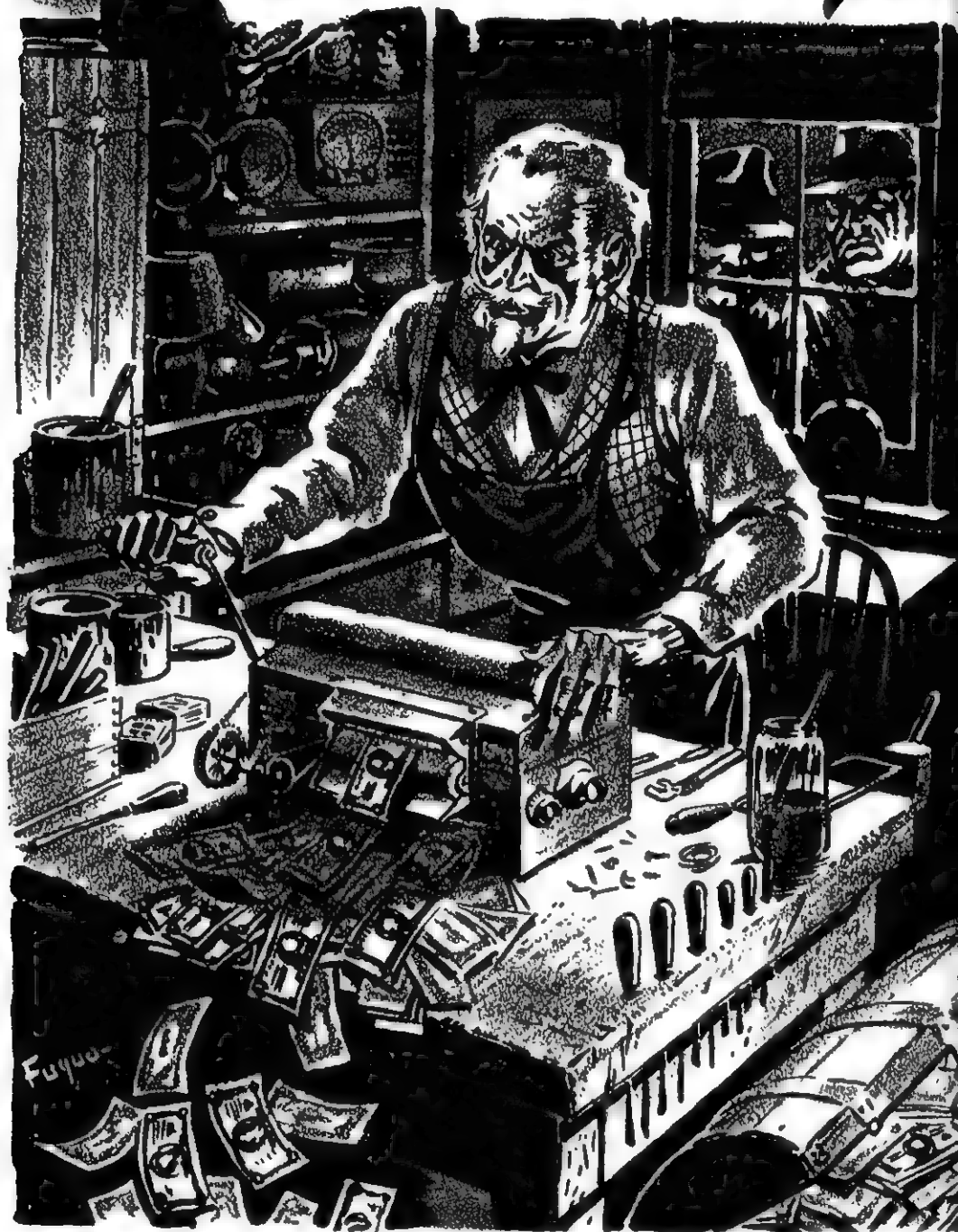
the dark lines, occurs, as is the case in most stars. The apparent surface of the star seems to be the same as that where the bright lines of the spectrum originate.

Using the bright lines, Mr. Scott found he was able to obtain measurements which agreed closely with the light variation. He proposed that a large proportion of molecules is present in the atmosphere of these stars. He also made the following statement.

"It was found that these stars were considerably nearer the sun than previously was suggested and thus intrinsically fainter. The minimum diameter of the surface of measured temperature of Mira was placed at -2.1 a.u. and the maximum at 3.0 . It was also established that the density decreased very slowly with distance from the center throughout the outer layer."

—Morris J. Steele

The Money



Machine

By CLEE
GARSON

Bert and Mindy had one of the oldest rackets of all—selling machines that make money out of paper. But this machine really worked . . .

IN KANSAS CITY we'd cleaned up to the tune of ten thousand bucks before that hospitable metropolis became too hot to hold us. In St. Louis we stopped over long enough to net a nice profit of three thousand more. Milwaukee was good for another three thousand, and when we breezed into Chicago, Mindy and I had sixteen grand in the kitty.

Believe me, brother, you don't count that kind of moola on your toes!

Little old Chicago had been selected

as the last stop on our tour, and after working the mines in said Windy City, we'd planned to head south to burn some of that dough under the nice Miami sun.

We'd holed up in the Marquis Hotel, a small flea nest just north of Chicago's loop, and had no sooner unpacked our underwear than Mindy began harping on a theme I'd had a hunch he'd get.

"Why don't we follow the ducks south right now, Bert?" he demanded. "We got more dough than any two guys can use for one pleasant season."

"Listen," I told him. "When we started this tour we agreed that we'd follow it through as planned no matter how badly or how well we did, didn't we?"

"Yeah, but—" Mindy began.

"Okay, then," I told him. "We follow it through. This is the last stop for us, see? We work this town for what it's worth and maybe we'll end up another five or ten grand to the good. This is no time to get lazy."

"We've worked hard," Mindy whined in his nasal voice. "We owe ourselves a vacation."

"We'll get it," I promised, "as soon as we work our traps here in Chicago." Mindy sighed, and I knew I'd won.

"Well, let's make it as fast as we

The old Southern gent was turning out paper money by the trunkful!



can," he said.

"We're gonna do just that," I promised him. "As a matter of fact I'm going out to beat the brush for a lamb this very afternoon."

I had better explain that "lamb" is a business term peculiar to our trade. In cruder language it means "sucker." Members of the trade Mindy and I belong to are called, in polite society, confidence men. This is no doubt due to the fact that we make our cakes and ale by taking lambs into our confidence. Or, in brief, taking lambs.

Mindy sighed and rang room service for a quart of booze. When he put back the phone, he threw himself on the bed and lighted a cigarette.

"What tools we gonna use this time?" he asked.

A "tool," in case you have no experience in our line, is nothing more than the type, or kind, of shears you use to fleece the lamb. Tools run all the way from the old badger game—which is a very crude tool at best—to the slicker kinds such as the missing heir gag or trick real estate turnovers.

"I have been thinking about that, Mindy," I told my partner. "We have been working like dogs, yes, like dogs, with some of the slicker tools. Slick tool work takes a lot of buildup and a great deal of time. I feel the same way you do about heading south but quick. So, I figure that this time we'll use Old Reliable."

Mindy raised up on one elbow, looking at me with considerable surprise.

"Not the money machine?" he demanded.

"The money machine," I agreed matter-of-factly.

"In Chicago?" Mindy demanded even more unbelievably. "In a tough smart burg like this?"

"The bigger the burg," I reminded him, "the dumber the lambs."

MINDY still looked doubtful. He sucked on his cigarette for a minute, staring at the ceiling.

"I don't like it," he said at last.

"You leave it to me," I said. "I'll find the lamb."

"It will have to be a lamb with its brains knocked out," Mindy said dubiously.

"Lambs are born without brains," I reminded him.

Mindy shook his head doubtfully.

"Maybe so," he admitted. "But the money machine needs a pretty simple lamb for the slaughter."

I picked up my hat and coat.

"That's what I'm gonna look for," I told him. "Beginning right now."

"Where you gonna look?" Mindy asked.

"All over," I answered. "Like I always do."

"What about the machine?" Mindy wondered.

"Nick Faroni should have one," I said. "I'm gonna drop by his place on Grand Avenue and ask."

NICK FARONI'S little shop on Grand Avenue, while operating under the front of an antique shop, was, of course, nothing more than a joint serving as a supply store to confidence operators and muggs.

Faroni had been in business at various stands around Chicago for over a dozen years. He carried a line of everything from bogus cash to loaded dice, trick roulette wheels, fraudulent legal documents and gold edged stock which, of course, wasn't worth a nickel. He also had a few money machines.

After leaving the hotel, I went straight to Nick's place to look over his line.

It was a little store in an old building, and crowded with antique furniture and similar junk. Upstairs, how-

ever, in a big loft room, Nick kept his business supplies.

Nick was little and round with a completely bald dome and a scraggly black moustache.

Over a drink in the back of his store we talked shop and he was glad to hear Mindy and I were doing so well.

"In times like these," Mindy observed, "it is unusual to make so many dollars." He sighed and took another drink. "Here in town, business in your line and all others has been very bad. Only in the gambling line has there been any activity of any sort."

I said that was too bad, and that maybe Mindy and I were lucky; and he agreed that maybe we were. Then we got around to the purpose of my call.

"I remember you had a line of money machines at one time," I told him.

Nick nodded. "They moved very slowly. I never really cleared a profit on them machines, and I have still got three or four upstairs gathering dust."

"That's fine," I told him. "I want one."

He looked surprised, even more than Mindy had.

"Are you kidding?" he demanded. "A smart operator like you should want a money machine?"

"I'm not kidding. That's the tool we're gonna use here in Chi."

"This town ain't Hayseed, Nebraska," Nick reminded me.

"I know that," I said. "It is a big town with a big heart and I am going to search for a big sucker."

Nick shrugged. "It's your business, Bert. I can't tell you anything about how to run it. You seem to be doing well enough. But—in Chicago, such a simple gag—" He shrugged again.

"Show me the machines," I told him.

Nick shrugged once more. "Okay," he said. "They're fine machines, as

money machines go. They even look like they'd work."

NICK wasn't lying. His money machines really did look like they'd work. They were about as big as a comptometer and the insides were filled with complicated machine work that looked scientific as hell as long as you didn't know the mechanism wasn't supposed to work.

You'd insert a ten dollar bill into the slot at the front—after previously planting two more ten spots inside—, turn the crank on the side, and presto—three bills, thirty bucks, would pop out!

The whole thing was designed to give the impression of making three bills out of one, of course.

Nick worked the machine for me a couple times, took it apart, showed me how to salt the extra bills inside, and then told me the price.

"Four hundred bucks!" I exploded. "That's robbery!"

Nick shrugged. "At the rate you and Mindy are now coining it, this machine can make you at least several grand. Why holler?"

I could have kicked myself for having let on that we were in the chips. But the mistake was made, and that was that. I knew Nick never budged from a price once set.

"But you said you've had these things lying around catching dust for a long time," I protested feebly. "After all, I'm doing you a favor, taking one of 'em off your hands."

"So they been taking up space I could of used for other stuff," Nick said, unbudging. "I gotta regain something of what I lost on 'em. My price is four hundred bucks. Take it or leave it."

"Okay," I said. "You robber."

I got out my wallet and Nick wet

his lips and smiled.

"You want I should deliver it?" he asked.

"I'll take it along," I told him.

The thing was heavy to carry, and when I got outside Nick's I couldn't find a cab. I was at least four blocks from a streetcar and there weren't any Elevateds within two miles.

I cursed fluently as I set out for the nearest car line with the damned thing clutched in my arms. And two blocks later, when I tripped on the curbing and dropped the machine, my profanity was hotter than a welder's torch.

Picking it up, I knew right away that the damned thing had been dented badly by the drop. Peeling away part of the wrapping to have a look-see confirmed as much.

The front end was caved in, but bad.

Four hundred bucks caved in! I could have bawled. But instead, I continued to curse. Curse and glare at the machine and realize that Nick would charge me the same amount for another.

It was while I stood there giving myself, the machine, and Nick verbal hell, that I saw the little shop across the street. A little shop that looked, at first glance, like a combination shoe repair and pawnshop, but which had an exceptionally timely sign painted on its dirty window.

"THINGS FIXED," said the sign.

"Anything Repaired," it said right below that.

"Col. Amos Marsh, Prop., read the bottom legend.

The things scattered in sloppy display in the window, roller skates, electric irons, glued vases, etc., were what gave it the first sight appearance of a pawnshop.

I looked at the badly mashed machine in my mitts, then at the shop. Providence, perhaps, had stepped in to

save me four hundred bucks. I crossed the street to the dingy shop, half a flight down into a basement store, and peered in through the dirty window.

AN OLD man, wearing a leather apron, a white walrus moustache and white goatee, sat behind a counter inside, puttering with what seemed to be somebody's broken violin.

I went around to the door and pushed it open. A bell jangled as I stepped inside, and the old man looked up querulously from his work.

I was standing there looking down from the top of the steps leading into the basement shop, machine clutched in my arms, feeling suddenly a little bit foolish.

"You fix things?" I asked.

The old man looked to the window where his sign was painted, then back to me, a little testily, it seemed.

"Suh, that is what the sign on this stoah proclaims," he snapped. "You have something, suh, that you wish repaired?"

I suddenly realized how the "Colonel" fitted in before his handle. The deep south, for a fact.

"You're Colonel Amos Marsh?" I asked.

"A careful perusal of the window, suh," said the goateed old colonel waspishly, "should also make that apparent."

I went down the steps and over to the counter. I put down the package.

"I'd like to have you take a look at this machine," I told him. "I'd like to find out if you think you can repair it."

The old colonel put aside the violin, brushed off his leather apron, and got up and came over to the counter. On his feet and so close, he didn't seem either old or feeble any more. He was taller than I'd figured and his wide shoulders were straight, his back mili-

tarily stiff. Tough old codger.

Silently, he began to unwrap the machine. Silently, I watched him. He stared at it frowningly for a minute or so after it was unwrapped. Then he looked up at me.

"May I ask, suh, just what sort of a gadget this is?"

I hesitated, then decided that no explanation was better than a phony one.

"I'm very sorry," I said stiffly. "I can't possibly tell you. It's a secret."

"Then, suh," he asked, "how can you expect me to repair it?"

I pointed to the badly dented front.

"That's the only part that needs repairs. All I want to know is whether or not you can straighten it out."

The colonel squinted at the damage, grunting a few times as he moved his nose around it.

"I think, suh, that it shouldn't be too difficult," he said, looking up. "A little heat, hammering it out, a touch of paint, and it should be like new."

I felt very much relieved. "Fine. That's swell. How much'll you charge and how long will the job take?"

Again the colonel gave the machine an appraising squint.

"I think I can have it ready by this time tomorrow, suh," he declared. "And the charge, suh, will depend on the time and materials I find necessary to apply to its repair."

I got suspicious.

"Give me a rough idea of how much that will be," I demanded.

"Perhaps five dollars, suh, or perhaps ten. I can't tell as it is now."

IT SOUNDED like highway robbery.

Ten bucks to hammer out the dented front of the machine, nothing more.

"Look," I said. "It isn't a watch. It won't take any delicate fixing. Don't you think that's a little high?"

The colonel shoved the machine

across the counter to me disdainfully.

"I will have you know, suh, that you can take this elsewhere if you do not agree as to the, ah, fairness of my price. My work, suh, is expert. Nothing less than expert. I pride myself on restoring objects to their original state."

There seemed to be genuine indignation, sincerely ruffled pride in the old guy's voice. And after all, I didn't know what someone else would charge, if I could get someone else to fix it. I shoved the machine back across the counter.

"Okay, okay," I said. "Only please try to keep down the cost, will you?"

The old guy was looking at the machine now as if he might not work on it for any amount of do. He glared belligerently at me.

"Do you question my integrity, suh?"

"No," I said quickly. "No. Not a bit. It's just that I, ah, can't afford to spend too much on the thing."

This seemed to pacify him a little. He looked back at the machine.

"Very well, suh. I will have this ready for you tomorrow at this time."

I decided it would be just as smart to leave on a happy note. After all, it might keep down the price. I grinned engagingly, looking around the shop.

"You certainly seem to have a varied bunch of stuff in here for repairs," I commented. "Must be an interesting business."

This seemed to warm the old guy up a little, for he smiled proudly.

"I have not done badly, suh, in this business," he said. "When you consider, suh, that I was born to the aristocratic and leisure class of the Old South, suh, never destined—so to speak—for trade or work of any sort, this," and he waved his hand to indicate the dingy little basement shop, "is no small accomplishment."

"Not bad," I admitted, wondering if the old guy was putting on just a trifle too much dog about aristocratic background in the Old South. I wondered how much of his colonel-routine was genuine, how much was bunk.

"I was always handy, suh," the colonel went on reminiscently. "Even when I was a wee tot on mah old pappy's plantation. But I nevah suspected, suh, that I would one day be forced to earn my livelihood with that talent."

I looked curiously around the shop. "This racket pay off well?" I asked.

The old colonel blinked puzzledly.

"I don't understand you, suh. Racket? To what do you refer, suh?"

"Just a term of speech," I corrected myself quickly. "I mean this business of yours. Do you find it, ah, profitable?"

The colonel went back into his freeze. I guess he figured the question a little personal. Which, of course, it was.

"My remuneration from this shop, suh, is sufficient for the needs and ambitions of an old man," he said coldly. "I am able to live with a certain dignity, while at the same time saving for, ah, certain future plans."

NATURALLY, my interest picked up. I smiled apologetically.

"I'm sorry for having been so snooping, old timer," I said. "But it did seem odd to see a man of your undoubted dignity and, ah, aristocracy, hard at work at a humble, though honest, trade. You were speaking of plans and ambitions. Do you mind a friendly stranger such as myself asking what they might be?"

This seemed to thaw the old boy out for good. He beamed hospitably, warmly.

"Well, suh. You look like a friendly man, an honest man," he said. "Fact

is, you make me think of a Taggart. You a Taggart, suh?"

"Taggart?" I blinked.

"A Georgia Taggart, suh. I knew the Georgia Taggerts well in my time. Their plantation was next to my pappy's."

"Oh," I said. "Oh, yeah. I see. No. I'm afraid that I'm not related to the Georgia Taggerts. That is, as far as I know. But about those plans you mentioned."

"Oh," that brought the old boy back. "Oh, of course. That's right. My plans, suh." He lowered his voice suddenly and looked around the shop like a conspirator. "I plan to return to the Old South, suh. To the land of my birth and allegiance. That, suh, is my ambition. I am going to return in the manner in which I was raised there—as a gentleman of leisure and culture and wealth."

I took another look around the dingy shop.

"You are?" I asked doubtfully.

"I am, suh," the colonel said positively. "As soon as I have saved the rest of the necessary capital." He sighed with the conclusion of his last words and looked suddenly less positive.

I nodded. "I see what you mean. You've been saving for that return all along, eh? And you need to save more before you can return. Is that right?"

The colonel sighed again. A very tired sigh.

"That is right, suh," he nodded.

I tried to make the question sound casual.

"Think it will be much longer before you have enough saved?"

The question worked perfectly. It fished out all I wanted to know.

"I am afraid, suh, at the present rate of my savings, that it will take considerably longer for me to arrive at the

figure I need. You see, suh, considering my age, and the probable number of years left to me, I estimated that I should need thirty or thirty-five thousand dollars to live out the rest of my life in the Old South under the circumstances of my youth. To date, I have been only able to save six thousand dollars to that end."

MY EYEBROWS went up a notch and my palms got moist. Six grand! Again I looked around the dingy shop. Not a bad nest egg for an old guy in a business like this. I was begining to have ideas.

"It would be certainly wonderful if you could, ah, stumble on an investment that would bring you all the money you needed for your ambition," I said casually.

The old colonel's eyes lit up like a beacon at the end of a blackout. Then the light flickered off again and he looked wearily despondent.

"But where could one find such an investment, suh?" he asked, purely conversationally.

I shrugged, casually, of course, and smiled.

"Sometimes," I said, "investments like that come up. You never can tell when." I turned and started up the steps to the door. At the landing before the door I turned around again. "I'll be in for the machine tomorrow at this time, Colonel Marsh," I said. "Do a good job, won't you?"

The old guy smiled vaguely and nodded. I could see that he was deep in thought over his plans and ambitions, so I practically tiptoed out the door. . . .

MINDY was lounging in the lobby of our hotel when I got back. I grabbed him by the sleeve and steered him upstairs to our room, pronto. When

I'd closed the door behind us and removed my coat, I walked over to the whisky and soda and poured out a couple of drinks. I handed one to Mindy, who was still blinking puzzledly and muttering.

"Pal," I said raising my glass. "This drink is to our success in a new one!"

Mindy almost lost his front teeth with surprise.

"What?" he squealed. "You gotta lamb set for shearing awready?"

I took a deep gulp from my glass and grinned.

"Brother," I asked, "how does six thousand bucks sound to you?"

"How do I look to you?" Mindy countered. "Crazy? Of course six grand sounds swell. But what's the pitch? Who's the lamb? What'll be the tools?"

"One question at a time," I told him smugly.

Mindy opened his mouth, then his eyes narrowed. He looked at my coat on the bed, at my hands, around the

"Where's the money machine?" he asked. "Ain't we gonna use one this time?" There was relief in his voice. room, then back to me.

I shook my head. "The money machine is already in possession of the lamb we're gonna shear. Only, he doesn't know that it's a money machine. That is, I haven't told him what kind of a machine it is. He's supposed to repair it. The front of it, anyway."

Mindy held up both hands.

"Wait a minute!" he implored. "Start from the beginning, why doncha?"

I grinned, poured myself another drink, and started from the beginning. Started from the point, at any rate, where I walked out of Nick Faroni's with the money machine. The rest of it I related step by step, word for word, everything about the old colonel and

his shop and the busted front of the machine, and, finally, about the nest egg the old guy put away, and how the old guy could be a set up as a lamb.

"He doesn't know it yet," I concluded, "but the money machine is gonna be his investment, Mindy. We're gonna show him, with the machine, how he can put in a ten dollar bill and pull out three instead of one. And then we're gonna sell him the whole damn thing for six thousand dollars."

Mindy had listened, enraptured.

"Six thousand bucks," he murmured ecstatically when I'd finished, "plus sixteen thousand makes twenty-two thousand iron men. Boy, oh boy—Florida, hang on tight!"

I was on my feet, walking excitedly back and forth. I was getting a brain-storm that pointed to a definite improvement on the old money machine sales psychology. An improvement that fitted in nicely with the character type the colonel represented.

"Look," I said to Mindy. "This is an angle that just hit me, see. We'll go back for the machine tomorrow. The colonel will have the front end nicely repaired, no doubt. Then, instead of slamming right into our sales spiel, we'll try out the machine in front of him, see?"

Mindy blinked. "Of course," he said. "Of course we try it out in front of him. We try it out and show him how he can make three bills outta one. Then he goes fer it, but we are loath to let 'em have it at first. We go through the usual act until he's near crazy to own it and then—"

I cut Mindy off.

"Not at all," I said. "We don't show him how it can make thirty bucks outta ten. We just try out the machine, see? We try it out—since it's had a bad fall—to make sure it's still working. We put a ten dollar bill into it and, what

do you know, *it doesn't work!*"

Mindy looked at me like I was crazy.

"You outta your mind?" he squealed.

I smiled tolerantly, going on like I hadn't heard him.

"You and I," I continued, "then go crazy as loons. We stuff that ten into it at least a dozen times, growing more and more frantic, see? And the damned machine still doesn't make three outta one!"

MINDY was shaking his head from side to side and moaning softly.

"Stop it, stop it," he begged. "I hate to see a sharp mind like yours going to pieces this way!"

I still ignored my partner's interruption.

"Don't you picture the old colonel?"

I went on. "Can't you see him bugging his eyes out trying to figure what we're carrying on so about? Can't you see him asking himself what're we shoving ten dollar bills into the machine for?"

Mindy started to answer this. But I didn't give him time, I continued.

"So finally the colonel can't stand it any longer, see? He breaks in almost begging to know what's going on, see? I start to tell him, and you shout at me to shut up. You scream at me and ask if I want to give the whole thing away, see? I say what the hell difference does it make now. The machine won't work anymore. It won't make money for us anymore. Somehow the damned fall has broken it on us so we're sunk, see? That's what I say. Then I start to tell the colonel again, and by now he has half the story anyway, see? He's wise to the fact that it's a machine that makes money. And he's also dead sure, from the way we've been moaning our brains out while stuffing bills into it, that it must have worked for us before, see?"

"Go on," Mindy moaned, shuddering, "if you have to."

"Now here's the pitch, see," I continued. "I spill a story to the colonel on how you were given the machine by a dying inventor. I tell him how it worked for us plenty of times, even though we didn't know the inventor's secret of what made it work, see. I tell him that now, since it's broken, we're sunk, that we haven't a chance in the world to ever get it to work again. Then you break back in. You start moaning about how this had to happen when we needed four thousand dollars more than life itself. You mumble something about the lack of the four grand meaning utter ruin to your uncle in Canada, or something sad, see."

"Why four grand?" Mindy perked up to ask. "Why not six?"

"I'll get to that later," I said. "Four grand will sound far less suspicious than six grand, which is all he's got to his name, see? I got a scheme to get the other two grand the next day."

Mindy shook his head dubiously. "I'm begining to see, but even so—"

I cut him off, rounding out my plan, "All this time, then," I went on, "I am wrapping up the machine sadly and getting ready to take it out of the shop. You keep moaning about the four grand and how awful it was that the machine had to break down at such a crucial moment. Then's when the old colonel breaks back in, see?"

"Why?" Mindy interrupted. "Why does he suddenly break in on our troubles?"

"Because, you dunderhead," I explained patiently, "the old colonel is a fixer. That's his business. He fixes things, see? He is more proud than Lucifer of the way he fixes things, see? He seems to think that there's nothing he can't fix. So, naturally, he'll figure

that he'll be able to fix this machine. Knowing what kind of a machine it is, he'll figure that he'll net a pretty profit for fixing it for us."

"Good gosh!" Mindy broke in, shocked. "You ain't gonna let him try?"

I SHOOK my head. "Of course not.

Not while we're there, at any rate. We'll shake our heads sadly and thank him, but tell him, no. We can't let him fix it, because we know he isn't clever enough to fix it. That will get him riled, see? It'll work on his pride and his anxiety to have a fling at a job that'll pay off big dough to him. He'll knock himself out trying to get us to let him fix it. We'll still say no, that we think no one could fix it but the inventor, and he'd dead, see?"

"It is all very complicated," said Mindy doubtfully.

"It is slick tool work, chum," I told him. "Because then you spring the Big Idea. You break in excitedly, shooting off your face about how badly you need that four thousand bucks inside of the next four hours, and how you'd be darned if it wouldn't be worth it to you to get rid of the machine then and there for four thousand bucks."

Mindy brightened a little. "Then do we sell him the machine for four grand?" he asked.

I shook my head. "Not right away. I break in then, and say you are crazy to sell a machine like that for such a piddling sum, and that I won't have anything to do with it, see?"

"No," Mindy said sadly. "I don't see at all."

"Look," I explained patiently. "By saying I won't have anything to do with the sale, even though the old colonel hasn't actually offered to buy the machine, I make him feel like he might have just been gypped out of the chance

of a lifetime, get it? Then he begins to *want* to buy it!"

"Why?" Mindy asked.

"Because he's now more convinced than ever that he can fix the machine and make himself a mint, don't you see?" I told him. "We've been playing our parts so fast and furious up to now that it'll never occur to the old colonel even to doubt in the slightest that the machine once made money!" I paused. "The only thing on his mind now will be the fact that he has a chance to buy it and repair it, due to the fact that you and I need four thousand bucks in a hurry, see?"

"Yeah," said Mindy. But he still didn't sound quite convinced.

"So, like I said," I resumed, "I put my foot down and say we'd be nuts to sell it for four grand. Then you get mad at me and ask what good all the money in the world would be if we can't raise four grand in the next four hours to stave off ruin, see?"

"Uhhuh," said Mindy, frowning.

"Then I go into my biggest act," I went on. "I go almost mad with grief at being in such a tough spot. I beat my head and tear my hair and finally break down and admit that you're right. I admit that we've no other course than to sell the machine, and bemoan the fact that our days of great fortune are forever over."

"And then do we let the old guy buy the machine?" Mindy asked pleadingly.

I smiled and nodded. "That's right. Then we let him buy. But not before I tell him how Fate must have decided that it be this way, and tossed us on his mercy for the four grand. I remind him that if he can't fix the machine, he's out four grand. But I tell him that if he can, he's in a mint, with a chance to go back to his Old South like he wants, and to go back as a millionaire. I tell him maybe Fate has

given him this one chance to make enough money quickly before he dies, and remind him that the six grand he's saved so far is still a lot of years away from the dough he really needs, see?"

"Do you have to end up with that spiel?" Mindy implored.

"I nodded. "It's a clincher. It's perfect psychology. It sounds so darned honest. He'll break his neck getting to the bank for the dough, then."

MINDY sat there in silence, staring at me with a mixture of awe and doubt.

"You sure you got this old guy figured right?" he asked.

"Positive," I said.

"I hate to bring this up now," Mindy said, "but you've planned all this on the fact that the machine doesn't make bills when we try it. Isn't it supposed to?"

"Sure it's supposed to, you dope," I said, "if it's salted with a couple of bills inside. But it isn't, and it won't be. So it won't make dough, get it?"

Mindy nodded. "Yeah, that's right. But you said you'd get the extra two grand out of him, too. How you figure on doing that?"

"Easy," I grinned. "As soon as I go to the bank with the old guy, you take a small part from the inside of the machine and pocket it, see. I figure we'll leave you alone in the shop to guard the machine when we go to the bank. That'll give you the chance."

"And then what?" Mindy demanded.

"And then, after we give the old guy twenty-four hours to tinker with the machine so it'll make money, we come back to his shop with the little nut or bolt you've removed the day before, see?"

"No," said Mindy. "I don't see at all."

"It's simple," I said. "Of course the old duffer won't have been able to get the machine started making money. He'll be pretty frantic by then. So we show him the little loose nut or bolt or whatever it'll be. We'll say we found it on the floor when we got back to the hotel. We'll say that obviously it's the missing part that accounted for the machine's not running, see?"

Mindy chortled with glee. "And then we offer to sell it to him for two grand, eh?"

I grinned. "Right. It's the missing part, and without it he won't be able to make the machine run. I get him to go to the bank for his other two grand—which'll be what we'll charge him for the missing part, see—and while he and I are gone, you'll salt the machine with the phony bills. When we come back, we put the bolt where it belonged, take his dough, show him how to crank the machine—which'll be salted with bills—and it'll make money, just like we told him!"

Mindy was doubly gleeful. "And we'll have tickets for a fast plane to Florida inside of the next hour. We'll leave him in his shop with the machine and clear out—but fast, right?"

I nodded confidently. "Right."

Mindy went over to fill himself another drink. He did so, turned and raised his glass, grinning.

"Here's to the shearing, tomorrow."

I raised my own.

"Six thousand bucks worth," I said.

Naturally, we both felt considerably fine. So we turned our attention to the bottle, the old conscience killer. . . .

THE day of the shearing broke bright and clear. Or at least the part of it that we saw when we rose around noon as a result of our bout. Mindy, as always before a big deal, was jittery.

My hands were none too steady, myself. But a quick, cold shower and a big breakfast settled both stomach and fingers, and one o'clock found us ready to hop a cab for the old colonel's shop.

There was a slight delay in our departure while I made Mindy go back upstairs and change the violently checkered suit he always tries to wear to our confidence deals.

He reappeared again, dourly and still jittery, some ten minutes later and we piled into a cab.

"Why must you always try to dress like the Hollywood version of a toiler at your trade?" I demanded.

Mindy was glum. "Awright, awright," he muttered. "It gives me confidence, that zoot."

"You might as well wear a neon sign saying *Con Man* in big red letters," I told him.

As we got closer to the neighborhood where old Colonel Amos Marsh had his shop, Mindy's emotional state grew even more sour.

"Don't look like no district where you'll find six grand growing on trees to me," he grumbled.

I was getting enough of that noise.

"Shut up!" I told him. He glowered, and with a minimum of muttering, shuts up.

Ten minutes later we pulled into the street where the old colonel's shop was located.

After we'd paid the driver and the cab left, Mindy stood moodily on the sidewalk, staring at the dingy shop window which said that we were outside the establishment of Colonel Amos Marsh, who fixed things.

I peered in through the dirty window, but I couldn't see the old colonel inside.

"He's probably in the back," I said.

We entered the basement shop, and the opening of the door caused the bell

to tinkle.

As we started down the steps, old Colonel Marsh came out of the back. I was in front, and he saw me first, and smiled.

"Ahh, how are you, suh?" he smiled over his white goatee. He wore his leather apron, as before, and he wiped his hands on it.

"Splendid," I said cheerfully. "How are you today? The machine repaired?"

The colonel nodded, beaming with pride.

"I am fine, suh. Yes. The machine is repaired. And an excellent job I did, suh, if I do say so myself."

"Good," I told him, walking over to the counter. "I'm glad to hear it." Mindy was right at my heels, so I turned, waving a hand at him. "Colonel Marsh," I said, "I'd like you to meet my close friend, Mr. Charles Oakly. You'll be interested to know that he owns half interest in the machine you've repaired for me."

"Pleased," grunted Mindy.

"Glad to make your acquaintance, suh," said the colonel affably. "I think you will also be pleased by the work I did on your machine. It looks quite like new, suh."

"That's nice," said Mindy.

"Well, let's see it," I suggested.

The colonel nodded, turned away and went to the back of his shop. I turned and gave Mindy the wink. He nodded doubtfully, still jittery.

IN A MINUTE the old guy came back with the money machine in his mitts. He carried it tenderly, and with pride. It was shining so brightly that I knew he'd given it a polish after repairing it; and I had to admit that the job he'd done on the caved-in front was a honey. You'd never have known the machine once had so much as a pin

dent in it, now.

The colonel placed the machine on the counter.

"There you are, suhs," he said beamingly. "I hope you approve of my repair job."

I shook my head marvelingly.

"Excellent isn't the word for that work, Colonel," I said. "It is super-magnificent mending!"

The colonel's chest swelled proudly.

"Thank you, suh. Thank you very much."

I held up my hand. "Don't tell me what you're going to charge, Colonel. I know you said it'd be somewhere between five and ten bucks, but such a price—in view of the job you've done—would be robbery. I'll pay you fifteen."

The old guy's eyes almost popped out of his head. He flushed with elation.

"That is very generous of you, suh. Very generous, indeed."

"Wait!" It was Mindy who broke in suddenly. He stepped up to the counter and looked at the machine.

The colonel frowned troubledly, evidently fearing that he was about to lose that extra five I'd tacked onto his charge.

Mindy put those doubts briefly to an end.

"I don't mean anything about the fifteen," he assured the colonel. "It's a swell job, and worth that. I'm thinking of something my friend hasn't thought of yet." Mindy turned to me. "Since the damn thing dropped," he asked worriedly, "hadn't we oughtta see if it's still awright?"

I frowned, taking my cue.

"I never thought of that," I said. "But, hell, I don't think it fell hard enough to hurt the operation of the machine. It'll work, don't worry. You'll see when we get to the apartment—"

Mindy cut in again.

"I can't wait that long. I got an awful feeling that mebbe dropping it ruint the works inside."

I laughed uneasily, taking a snide glance at the colonel, who was taking in all this a bit bewilderedly.

"Don't be silly," I said. "Of course, it still runs."

Mindy made his voice hoarsely worried.

"I wanta see, now," he demanded, persistently.

I looked at the colonel. Then I looked back at Mindy.

"Not in public!" I protested.

The colonel, catching the idea, flushed and pretended not to be listening. He walked over to the end of the counter and began fiddling with something.

Mindy lowered his voice to a hiss.

"He won't be able to figure it out. We can just try it once, now!" he insisted.

The colonel still pretended to be engrossed at the end of the counter. But it was obvious that the old duck was taking in every word we said, and sneaking side glances at us.

"All right," I agreed reluctantly. "Just try it once, if it'll ease your mind."

"Got a ten dollar bill?" Mindy asked.

I BROUGHT out my wallet and gave him a bill. Then, with a sharp glance at the colonel, I draped myself over the counter just enough to cover Mindy's actions with the machine.

Mindy put the ten dollar bill into the thing, muttering worriedly as he did so. Then he turned the crank. Of course, since the thing wasn't salted, nothing happened. The ten dollar bill just came out the other end.

Mindy let out a yell of horror.

"Migawd! What did I tell you!"

"No," I bleated. "No. Something's wrong. It *can't* be broken! Try it again. For God's sake, try the damned thing again!"

Mindy repeated the action feverishly. From the corner of my eye I could see the colonel edging to a position where he could get a glimpse of what was going on. Our fish was getting curious as hell.

We went roaring into our act, then, Mindy holding up his end of it perfectly. His jittery state was over, now that he was "playing" before an audience. At least half a dozen times more we shoved that ten dollar bill into the machine, cranked the handle, and watched it come out again unaccompanied by the two other tens which would have emerged had it been salted beforehand.

The colonel had tossed all pretense of minding his own business to the winds. He had now moved back behind the counter where we stuffed the money frantically into the machine, staring at the routine with popeyed bewilderment.

And then, in the middle of our feigned hysteria, I pretended to notice the colonel's observation for the first time. I whirled toward him, grabbing Mindy's arm as I did so.

"We've been watched!" I gasped.

Mindy sucked in his breath and stared. Both of us stared at the colonel and the old man was crimsoning in embarrassment.

The colonel tugged at his droopy moustache, touched his goatee apologetically, and turned his eyes toward the ceiling.

"He knows what we've been doing!" Mindy hissed sharply.

I looked back at the machine, resuming my frenzied tone of anguish.

"What difference does it make now?" I groaned. "The damned thing won't

work any longer, anyway."

Then Mindy went into the toughest part of his act. Sheer despair. The four thousand dollars-and-how-are-we-ever-going-to-get-it act. The colonel was gaping at us again, his curiosity almost unbearable. Just to keep it in his mind, we stuffed the ten dollar bill into the machine, turned the crank, watched it come out alone, and shrieked bitterly a few times more.

And then, of course, the colonel couldn't stand it any longer. No one could have. He asked us what it was all about, particularly what we thought we were doing when we put the money into the machine and cranked it out again.

In feigned despair, I began to tell the old guy. Mindy broke in hoarsely to tell me to shut up. He demanded to know if I wanted to give our secret away to every stranger we met. I told him what was the difference now, and so forth. I pointed out that the machine was useless, wouldn't make money for us any longer—all because of the fall it had had.

Then I started in telling the colonel the answer to his questions, even though he's got a pretty good idea of what it's all about just from the exchange of words I had with Mindy.

It was easy, then, to go into the dying inventor tale, and how Mindy and I had been given the machine by this inventor we'd befriended as he was dying. The rest of the yarn, as I'd planned it, went off smoothly. And what was more important, the colonel seemed to be eating it up.

THEN Mindy came in every so often with a moan about the four thousand dollars we had to have, and how were we ever gonna get the money now.

I began wrapping up the machine most sadly, as Mindy moaned on and

I threw in a wail here and there. The most crucial point in our plan was coming up, and my palms were getting moist. Still, the old colonel seemed pretty well in hand.

Sure enough, in breaks the old guy just as I had planned.

"Pardon me, suhs," he said eagerly. "Perhaps, if you were to let me have a chance to fix that machine for you, I might be able to do—"

We both exchanged glances that were sadly, wryly humorous. No, our glances said, no, you couldn't fix it in a million years. You don't have half enough skill and brains for that. Then we said as much vocally to the old guy. I caught the indignant flash in his eyes the minute we refused to let him try.

"The only one in the world who could fix this machine is the inventor," I told the old guy with sad kindness. "And, unfortunately, the inventor is dead. No, I'm sorry, Colonel. You'd never have a chance fixing it."

The old guy began to bristle. His pride had been wounded, and now nothing on earth would ever convince him that he couldn't repair that machine if he only had a chance. Too, you can see a little bit of that sad human element known as greed working inside the old guy. He's pretty well convinced by now that the machine—when working—actually makes money, and he's thinking already in terms of what it would be worth to us if he could repair it.

He began to perspire from his sudden anxiety to have a go at that machine. To perspire, and to plead.

I was firmly but politely salesproof. No. We couldn't let him try it. He might make it further off form than its original self. No. He just wouldn't be able to do it. Thanks, just the same.

By then I had the machine half

wrapped and was looking around for a piece of string, when Mindy came back in with explosive force. He opened his barrage with a moan about the four grand we needed so desperately in such a short time. He announced that if we didn't get the four grand in a few hours we might just as well jump in the river with the machine around our necks. And then he wound up dramatically:

"For four thousand bucks I'd sell the machine in a minute!"

"You're out of your mind!" I yelled. "This machine is worth a million billion bucks if we can get it working again! I won't have a thing to do with selling it!"

"How badly do we need that four thousand bucks?" Mindy yelled angrily.

I looked suddenly white, and scared. I looked as if the lack of that four grand would mean at least the electric chair. I gulped, and looked at the machine with tears in my eyes.

"But, if we could only get it repaired, it'd be worth—" I began.

Mindy cut me off. "Maybe it would," he said. "But no one knows how to repair it. Least of all ourselves!" He took a deep breath. "And if we don't get that four thousand in a couple of hours—" He let the sentence trail off ominously.

IT WAS then that the colonel cleared his throat and made his first bid.

"Being from the Old South, suhs," he said, "I am a gambling man at heart. I have confidence that I can repair that machine. Such confidence that I would be willing to offer most of my small savings for its purchase. Four thousand dollars, suhs."

I looked at the old guy a minute. He was so excited he was shaking. I could see what was running through his mind. If he repaired the machine he could

make back his investment in an hour and clean up enough dough in the next ten to live for the rest of his life in his Old South like a multi-billionaire.

I shook my head sadly.

"No, Colonel. I couldn't let you risk your capital that way. From what you told me yesterday, your entire ambition rests on that money and the fact that it will some day be enough to permit you to return to the Old South." I shook my head again. "No, as much as we need that money, sir, I couldn't allow you to risk your ambitions on the chance of repairing our machine."

"It's a fair gamble," Mindy broke in. "We need the money, and if he repairs the machine, he'll be able to live like Royalty for the rest of his life in the Southland. If he's only got about four grand at this time in his life, it's a cinch he won't pile up enough in this store here to get back South as a gentleman of leisure before he kicks off."

Old Colonel Marsh broke back in, his eyes pleading and watery and fixed on me.

"That, suh, is precisely the situation," he said. "I have saved for many years to get what I have now, but it is not sufficient to fulfill my plans for retirement in the Old South. I will need more, much more, than I could ever hope to get by saving. This, suh, would be a gambling opportunity in which I could bank my skill in repairing the machine against my savings. I would, *I am*, quite willing to take the risk!"

If any lamb ever begged to be fleeced, it was old Colonel Marsh.

I looked at Mindy, then at the colonel, then at the machine. I sighed heavily and let my shoulders sag in surrender.

"Very well," I said. "Its' a deal. We need the money too badly to argue any longer. I hope you have luck with the machine, Colonel. In what bank

do you keep your money?"

IT WAS one of the easiest fleecings I'd ever made. I went to the bank with the old guy and waited outside in the cab while he drew out four thousand bucks in cash. Mindy, in the meantime, was back in the old guy's shop "watching" the machine. Removing the part we'd sell for another two grand to the lamb the following day, of course.

When we got back to the old guy's shop, Mindy gave me the wink which signalled that he'd copped a bolt or nut, and we might as well scram. I had the old guy's dough in my pocket, and we only took long enough to fill out a bill of sale giving him possession of the machine. Then we beat it.

Mindy was crazy wild with joy all the way back to our hotel in the cab. He took back all the nasty doubts he'd had about me, and counted the money over and over at least a dozen times.

"Four grand," he kept repeating, "plus sixteen grand we awready got, that makes twenty thousand bucks—plus two thousand more tomorrow. Yow!"

I took the four grand out of his hands and stuffed it back into my pocket.

"Tonight we celebrate," I promised. "And tomorrow morning you make reservations on the noon plane out of this town, then we'll call on old Colonel Marsh and sell him a bolt for two thousand bucks."

"Marvelous!" Mindy sighed ecstatically.

We celebrated, of course, that evening. Nothing was too good. Sky was the limit, and we did the town right. It was really worth it, considering the dough we'd cleaned in one afternoon's work. And, too, it helped get the kind of pitiful picture of the old colonel and his life savings out of our minds. . . .

COLD gray morning came, as cold gray mornings always come to two people with hangovers. It was pretty bad. My head was double the size of a beacon, and just as full of flashes. Mindy wasn't any better. But it was nine o'clock, and we had a hell of a lot to do if we wanted to pick up our extra two grand and ride out of town on the wind by noon.

While Mindy packed our luggage, I called the airport and made two Miami reservations for noon. In the meantime our breakfast, consisting of two bromos apiece, was sent up by the management. We dressed, then set out for the little shop on Grand Avenue where our lamb was waiting his final fleecing.

In the cab on the way, even Mindy had compunctions, we were both that low with hangovers.

"Seems kinda greedy, but what the hell!" he observed.

"You mean about taking his last two grand?" I asked.

Mindy nodded. "Yeah, that's right. But we're crazy if we don't."

"Yeah," I agreed. "Crazy-crazy."

Neither of us said any more about our consciences after that, and finally the cab pulled up in front of old Colonel Marsh's fix-it shop.

When we entered, the bell jangled as always, bringing the old guy out from the back. He looked up at us, startled, then pleased.

"Well, suhs!" he smiled. "How are you, suhs?"

I was a little bit surprised at his cheerfulness. But then, maybe he was still puttering with the machine, fully convinced that it would take a little time to fix.

"How are you coming on the money machine?" I asked.

"Excellently, suh," he replied. "Just excellently, if I do say so."

I nudged Mindy to bring out the bolt,

then said: "We've got something here that fits on the machine, Colonel. Something that must have fallen loose in our apartment. It is undoubtedly the reason it failed to work. We brought it here today, frankly, to sell to you. But," I put in quickly, "to sell only if it makes the machine work."

The colonel wiped his hands on his leather apron and smiled a little bewilderedly.

"You say that you found an extra part which was undoubtedly responsible—by its absence—for the failure of the machine?"

"I think so, Colonel," I said amiably. "And we're going to sell it to you darned reasonably, if it proves to be the missing item in the operation of the machine."

A puzzled look came into the colonel's eyes and he tugged abstractedly at his goatee.

"But, suh, that is most strange. You see, I have already repaired the machine. It is working splendidly, suh."

"SURE," I said. "But this part will—"

And then I realized what he'd said!

"Say that again!" I choked hoarsely.

"I have repaired the machine, suh," the old colonel said proudly. "Just as I thought I could. It is working perfectly, suh, and I have been making money for the last two hours." He smiled, half-bowed. "I am deeply grateful to you both, and if you will excuse me, suhs, I will return to the machine."

Mindy broke in then.

"Listen," he said sharply. "You're crazy. That machine wouldn't ma—"

I cut him off with an elbow jab in the ribs.

"Sure," I said a little hoarsely. "Sure we'll excuse you, Colonel. You don't mind if we drop back some time when

you, ah, aren't so busy?"

Old Colonel Marsh smiled amiably. "Of course not, suhs. Mah latch string is always at your disposal. Goodday."

I took Mindy by the elbow and got him out of there. The old colonel went back into the rear of his shop. On the sidewalk a few stores down, I stopped for breath.

"What's this all about?" Mindy demanded indignantly.

I took out a handkerchief and mopped my brow.

"I don't know," I admitted. "But it isn't going according to schedule. That's why I wanted to get out, quick, in order to figure this thing out."

"Don't tell me the old guy is making dough!" Mindy snorted scornfully.

"No. Of course, he isn't," I agreed. "That's ridiculous. But something is in the wind. That old devil is up to some scheme of some sort; otherwise, why would he lie to us like that?"

"I dunno," Mindy said. "Why?"

I saw a cab and whistled it over to the curb. We climbed inside, and I gave the driver our hotel address.

"I don't know why, either. But there's something funny going on, and we're not leaving this town until we figure it out. I'm canceling those Miami reservations until we figure old Colonel Marsh's game."

EXACTLY eight hours later in our hotel room, I stamped back and forth through the smoke and cigarette butts and whiskey glasses, still trying to figure it out.

Mindy was stretched out on the bed, eyes half closed, listening dully to my self-arguments, and occasionally putting in a weary word.

"If he was still the sucker," I ranted hoarsely, "he would have bitten on our extra-gadget gag."

"Right," Mindy intoned tiredly.

"But he didn't bite. Instead, he thanked us very kindly and said he already had the machine working. A sucker wouldn't say that," I continued.

"Why not?" Mindy wondered.

"Because," I went on hoarsely, "a sucker wouldn't try some snide and clever turnabout on us. A sucker would holler copper so loud it would break all the windows on Grand Avenue. But the old guy didn't holler copper and he didn't bite on our offer of an extra gadget for the machine. He didn't do anything according to Hoyle. All of which means that something awfully funny is going on."

"Well," said Mindy wearily, "mebbe he did make the machine work, like he said. Why don't we forget the extra two grand and head for Miami, huh?"

I poured myself another drink.

"No," I said. "I got a feeling in my bones that says we're in the middle of something, and I won't budge out of this town until I find out what that something is."

"Well, relax a minute or so, anyway," Mindy moaned. "That panthering up and down is driving me nuts. Have another drink." He sat up and grabbed the scotch and the soda-siphon. I downed my drink, handed the glass to Mindy for a refill, and sat down wearily.

"He said it works," I muttered disgustedly, "when any ass knows it couldn't work. What in the hell is he up to?" I was referring, of course, to our old chum, Colonel Marsh.

We had four more drinks while I did some vocal jujitsu with myself all over the room. But the more I knocked myself out trying to figure the angles the old guy was playing, the more my head rang.

Three drinks and an hour later, Mindy's nerves got the best of him.

"Dammit," he yelped, "there's no

sense driving ourselves crazy around this room here. Why'n't we got back to the old guy's shop and ask to see the damned machine. Then we can ask him what he's trying to pull. That's the only way we'll ever get an answer!"

I was willing to agree to anything, then.

"Okay," I muttered. "Let's catch another drink, then get started."

We caught four more drinks, then left for the old guy's. . . .

FOR some reason—maybe the liquor, maybe caution—I told the cab driver to drop us off a block away from the old guy's shop. Mindy and I weaved the rest of the way down the street on foot. Out in front of the colonel's fix-it emporium, we stopped.

There were no lights on in front of the store, and the door was locked. But light glimmered from the back.

"He's working overtime," I hissed to Mindy. "But on what?"

We stood there weaving a little, trying to sort our opinions, and then I got a bright idea.

"The back of his shop faces an alley," I said. "Let's go around to the alley and see if we can peek in."

We weaved our way down the block until we found the alley entrance. Then we stumbled on past ashcans, followed a turn, and one minute later were tip-toeing up to a lighted basement window which could belong to none but the colonel's shop.

Mindy was the first to gape in thought he window.

"He's down there, awright," Mindy hissed.

"Shhhh!" I hissed back, elbowing him aside and taking a look myself.

Mindy was right. Old Colonel Marsh was down there, all right. Down there, moving around in a workshop equipped

with a big wooden table on which was our money machine.

In the corner of the room were two huge, old-fashioned steamer trunks of the sort that spelled Rhett Butler, Mint Juleps, and the Mississippi River. The sort of trunks Grant might have had carried into town when he took Richmond. One of them was open. Open just enough to reveal that it was stuffed, literally *stuffed*, with wad after wad of paper currency!

I almost had a heart attack.

Mindy had moved up behind my shoulder. And now he saw it, too. He almost choked to death.

"Migawd!" he gurgled, "look at all that moola!"

My hands were shaking so much I could scarcely control them.

"What're the denominations of them bills?" Mindy gasped. "There must be a million bucks there!"

"I don't know," I managed to croak. "Can't tell from here. One thing's certain, though. That's *dough*, folding money, paper joy, jammed in that trunk!"

And then the colonel walked back in front of the table and machine and turned the crank on the side of the machine. Three bills spilled out and he calmly stuffed these in his pocket. He turned the crank again, after inserting one of the bills in the front. Three more popped out, and he put these in his pocket.

Mindy had a grip on my arm that would have crushed a girder.

"The damn thing is making moola!" he gurgled.

I could only nod, my eyes still on the old colonel.

"Are them twenty, ten, fifty, or hundred dollar bills he's making?" Mindy croaked.

I shook my head. "Still can't tell from here. But, chum, that's *dough*."

There's no doubt about that!"

The colonel had stopped putting bills into the machine and running out three in return. He walked over to the open trunk stuffed with paper money and slammed it shut. Then he locked it, put the key in his pocket, and went over to the other trunk. He opened it to look inside an instant.

The second trunk was also crammed with money!

Now Colonel Marsh closed the second trunk and locked it, going back to the machine. He stood there, looking at it fondly, proudly, until he turned suddenly to face the door that led to the front of his shop.

I SAW what made him turn. The entrance of a big buy in tattered overalls. Then a pantomime took place. The colonel pointed to the trunks and the man in overalls nodded, grabbing the first trunk and dragging it out into the front of the shop.

I turned to Mindy.

"Get out in front and watch on the sly," I hissed. "See what happens. I'll watch this end."

Mindy nodded and left.

The colonel waited patiently until the guy in overalls came back and dragged the second trunk out into the front of the shop. Then the colonel went over to the money machine, patted it fondly, and took off his leather apron. In another minute he was slipping into a coat, and in another minute after that, he snapped off the light.

I almost lost my mind. It was impossible to see whether or not the old colonel had picked up the machine after he snapped off the light and walked out front.

It seemed like an hour before Mindy came dashing back into the alley and fell over an ashcan. As I picked him up, he told me. The old colonel and

the guy in overalls had put the trunks on a horse-drawn wagon. Then the colonel had climbed up beside the guy and the two clattered off down the street, the trunks bouncing around in the back of the wagon.

"Was the colonel carrying the money machine when he left the shop?" I demanded hysterically.

"No." Mindy shook his head. "I'm positive he wasn't. Neither was the freight hauler."

I grabbed Mindy hard by the arm. "Chum, come on! We're going to break in through that alley window before the colonel comes back!"

We weren't subtle. Burglary wasn't our regular line. We just kicked in that basement window, picked out the glass splinters remaining, and climbed into the back of Colonel Marsh's shop.

Three minutes later, machine in our arms, we were running like hell down the alley. Ten minutes after that, we had cut six blocks across town and climbed into a taxicab with our precious burden.

Maybe it was the liquor, maybe it was the elation, maybe it was the excitement, maybe it was all three. At any rate, Mindy and I were hilariously ecstatic as we rolled along in the cab with the machine on the seat between us.

"A million dollars!" Mindy yowled.

"A hundred million!" I corrected him.

"Two hundred billion million," I was corrected in turn.

The cab driver glared back at us.

"Maybe you two financiers would like to give me the address yuz wanta go to," he suggested.

"To our castle!" I shouted gaily, giving him our flea nest's address.

"No!" Mindy declared. "We gotta have a drink. A nice big drink before we get around to the labor of making a

million bucks inna few hours or so!"

That sounded all right. In fact, it sounded swell. We gave the cabby the address of an ultra swank bar. Four hours later, or at three ayem precisely, we left said drinkery singing hilariously, machine still in our arms. In the interim, Mindy had passed out ten dollar bills as tips to every employee in the joint. But what the hell, we could afford such piddling gestures.

SOMEHOW we managed to get back to our hotel room without falling down any elevator shafts, Mindy gave the bellhop fifty bucks and sent him out for some champagne.

Tenderly, we placed the money machine on the dresser. It was a little hard to see, inasmuch as it was sometimes two machines, sometimes three, and occasionally just fuzzy. But I went to our trunk, got out every last bit of our twenty grand bankroll from the false bottom which served as our hiding place for moola.

We waited until the bellhop came back with the giggle water before starting out on our first million. We had a couple of drinks in toast to success, a couple more in toast of the toast, and then took our mighty cash bankroll and started to prove it was puny in comparison to what it was soon going to be.

Mindy was as drunk as I was—which was terribly drunk—but he had sense enough to lock and bolt the door before we started. And then the first bill—we couldn't see the denomination, thanks to the blur that covered all objects we looked at—was shoved into the front of the machine and the crank turned.

Three bills popped out, and Mindy and I whooped like madmen, had another drink, and shoved another note from our bankroll into the machine. Three more bills popped out.

It was wonderful. It was like nothing Midas ever dreamed of. An hour passed and we were knee deep in paper currency. Another hour passed and we'd completely filled one closet. Another hour trickled by and we must have cranked out a thousand or more bills. Inside of another hour, we'd used up all the bills in our twenty-thousand bankroll and were shoving the ones made by the machine back in. They made three each. It was endless.

I don't know who passed out first. It doesn't really matter much. I was the first guy to come out of the fog at eleven o'clock the following morning. I opened my eyes to find myself on the floor on my back, staring up at the dresser on which the money machine still stood.

I was lying in a welter of paper currency. The entire room was a windstorm of paper currency!

Mindy, snoring on the bed, was almost completely covered with paper currency!

The room stank with alcohol and cigarette smoke and paper currency.

Groggily, I climbed to my feet. My heart was pounding so fast I thought it would pound right on up and out of my throat. Riches! Untold wealth! Money that—

And then my vision came into focus. My vision came into focus and I saw one of the pieces of paper currency clearly for the first time.

It was paper currency, sure, but not paper currency of the sort I was used to. *It was paper currency of the sort issued during the Civil War by the Confederate States of America!*

I crumpled it into a ball, threw it away, picked up another, and saw it was also Confederate moola. Then I picked up another and still another bill. They were all the same. Confederate dough!

I looked around for a quiet corner in which to get deathly sick. Looked around, while realizing that twenty thousand bucks in good present-day U. S. money had been turned into this Confederate currency by two drunken boobs named Bert and Mindy!

And then I remembered the colonel. And I thought of the Old South. My language was strictly vile.

I looked in my wallet. There was a dollar bill there, present-day U. S., which had evidently escaped notice last night. Automatically, I inserted it in the front of the money machine and cranked the handle.

Three bills popped out. Three *Confederate* bills.

The colonel had fixed the machine. Fixed it to make money, too. Only the money was his kind of money. Confederate stuff. I thought of the stuff in the old colonel's ancient trunks. It had undoubtedly been the same kind of Rebel riches.

Then I looked at Mindy, snoring under about fifty thousand dollars' worth of Confederate money. I looked at him and decided to let him wake up and find all this out himself, the hard way, like I had. . . .

THERE really isn't any postscript to this. Mindy and I still have the damned machine. And it still makes money, Confederate style. We've wasted another small fortune on it, trying to make it pay off in on-the-level currency. Of course, the damned thing won't.

We went back to the shop where the old Southern colonel fixed things. We looked all over the neighborhood, that is. But we couldn't find the shop, or the colonel. Or anyone who knew about either shop or colonel.

At the bank, where the colonel had gone to get the four grand to buy the

machine, they didn't know of anyone by that name, or of that description.

But I think I know where the colonel is now. He's in the South. The Old South that he spoke of so tenderly. Living like a king on some vast plantation, spending his Confederate fortune right and left in a manner befitting his style and station.

Huh? You don't get it? Why, I mean *Old South*: Just like he said it, O-L-D!

But Mindy and I have got one consolation, one hope of squaring the score with that affable old stinker. Wait'll he tries to spend that machine-made moola when Grant takes Richmond!

THE END

REHABILITATING VICTIMS OF SLEEPING SICKNESS

SLEEPING sickness is such a terrible disease, not only because of its effects while the victim is ill but also because of its terrible after effects. However, there is promise of help for these victims according to the reports of Dr. Howard D. Fabing, who has been successfully treating patients affected with sleeping sickness.

This treatment was first used in Bulgaria where the medicine was discovered. It consists of the white wine extract of the Bulgarian belladonna plant. A Bulgarian herb specialist named Ivan Raefi, of Chipka, discovered the effectiveness of this wine for sleeping sickness treatments.

When news of this treatment reached Italy, Queen Elena founded clinics to give the treatment throughout her country. From Italy the treatment was brought to England and America.

This new method is not a cure for the disease but Dr. Fabing reports that out of the 23 totally helpless patients he treated, 22 were aided while 9 of them showed definite improvement. The after-effects of the disease which respond best to the treatment are the rigid muscles, mask-like

faces, and peculiar walk. Although the patients feel better, their mental symptoms are not always relieved.

Based on the cases already treated, Dr. Fabing finds that the treatment starts to produce results in from three to seven days. The first two or three weeks brought the greatest improvement in the patient's condition. No special diets are required, but all the patients said that they could not drink any alcoholic beverages while taking the medicine. The medicine has a slightly sedative effect on the patients and this tends to make them sleep a little longer at night and desire a nap after lunch.

There is still a mystery as to why the belladonna grown in Bulgaria should be so superior to that grown elsewhere. Pharmacologists are also trying to discover why the white wine extract is better for the treatment than a wine made from ethyl alcohol or distilled water. Answers to these questions are especially important now that the war has practically shut off our supply of this effective medicine.

"DUCKY" OPERATION

CALLING Emergency! Get operating table ready! The patient, odd as it may seem, is Mr. Wild Duck.

Warren H. Nord of the Minnesota Agricultural Experiment Station has invented a device to save wild ducks from dying of lead poisoning.

Shot pellets that have fallen into the water are frequently shovelled up by wild ducks while they are searching for food at the bottom. The pellets are retained in their gizzards, and in time may cause lead poisoning. This has been the cause of major wildfowl losses in recent years.

It is easy to catch lead-poisoned ducks for they are too sick to fly. The ducks may be uneasy and uncomprehending of the operation, but the poisonous leaden pellets are removed successfully and they are thereby saved from literally

being "dead ducks."

The device works somewhat on the principle of the stomach pump used on humans. It consists of two tubes of Pyrex glass, one within the other. The tip of the inner tube projects beyond the end of the outer one, and is bent over just enough so that its opening is parallel with one side instead of straight across the end.

The stricken duck is laid on its back, wing and feet being held to prevent it from struggling. The tube is then carefully pushed down its esophagus and into the gizzard. In the annular space between the two tubes a trickle of water is flowed through. This loosens the contents of the gizzard, which are then drawn out through the inner tube, by means of a slight vacuum produced by an aspirator attached to a lab faucet.

WHAT ABOUT THAT BLOOD YOU DONATED?

By Lynn Standish

What becomes of the blood you donate for the saving of the lives of our men at the front?

SO you did give a pint of your blood to the Red Cross? But you can give still more, for it's going for a worthy purpose. The average healthy man or woman can safely give blood every three months.

As soon as the hemoglobin, the red coloring matter of the blood has returned to normal, second, third and subsequent donations to blood banks and plasma banks for transfusions can be safely given. The average time for this after a donation of about one pint of blood is between 49 and 50 days, and the average healthy donor is likely to feel equal to giving a second pint long before that time. However, unless the amount of hemoglobin in the donor's blood is determined regularly by blood tests, the longer interval of three months is advisable. Women need a little longer time than men to rebuild their hemoglobin stores, so for them, the intervals between donations should be longer.

Small doses of iron increase the daily hemoglobin regeneration by nearly 50% and shorten the recovery time to 35.2 days, but the iron has progressively less affect after subsequent blood donations than after the first one. Hemoglobin stores are replenished at about the same rate after the fifth donation as after the first.

More than 85,000 persons have donated blood since the Pearl Harbor attack. However, the Red Cross stressed that hundreds of thousands of additional donors are needed.

Between the donor station where you may give your blood to save life and the hospital bank where it is on call for desperately ill patients lies a complicated organization of doctors, nurses, technicians, record clerks, and general management.

In 1940, when the New York Academy of Medicine and the Blood Transfusion Betterment Association first started on the blood plasma project for Britain, they thought it would be relatively simple, but much to their distress they found this was not the case at all.

A community hospital about to establish its own blood bank does not face so many problems. Still, it must equip itself with iceboxes, incubators, centrifuges, electric pumps, and suitable bottles for the collection and storage of the blood. It must determine whether to establish a blood bank or a plasma bank or both.

Plasma is blood minus the red blood cells. These may be removed by allowing them to settle out

of the blood, or they may be separated from the fluid portion by centrifuging the blood. Plasma is considered nearly as satisfactory as whole blood for transfusions. Its chief disadvantage is that it does not contain the coloring matter in the red cells, hemoglobin, which carries oxygen. Whole blood may be preferred to plasma in such cases as severe anemia or poisonings such as carbon monoxide or nitrobenzol which damage the red blood cells.

Plasma has several advantages, however. It keeps longer and can be used without typing or matching with the patient's blood. It may also be dried which makes it easy to transport. Dried plasma can keep several years without refrigeration.

When plasma from many persons is put into a common pool typing is unnecessary. This pooling greatly dilutes the agglutinins from each person's blood and thus avoids the danger of a patient getting so much of the wrong kind of agglutinin that his red blood cells would be clumped together or otherwise kept from their vital job of carrying oxygen to all parts of the body. Each collision is tested before pooling to make sure it is free from dangerous disease germs.

The American Red Cross is also prepared to provide a limited supply of life-saving dried blood plasma to civilians, should the enemy strike at American cities.

Under the new civilian distribution plan, the plasma will be distributed by the Red Cross to points where the enemy may strike. The plasma will be handled by the disaster relief organization of the Red Cross, and will be issued immediately through medical channels to be jointly determined by the Office of Civilian Defense.

Chairman Norman H. Davis, made the following statement: "Formal understandings exist with the military departments by which the American Red Cross is authorized to call upon the equipment and the supplies of the armed forces in times of catastrophe. Through these provisions, the supplies of dried blood plasma held by the armed forces can be drawn upon by the Red Cross in case of civilian casualties caused by enemy action."

The Red Cross reports that more than 55,000 donors have contributed blood to this civilian supply service. The blood is being supplied at 17 Red Cross Blood Donor stations in cities near the laboratories processing the blood for Army, Navy, and civilian defense.

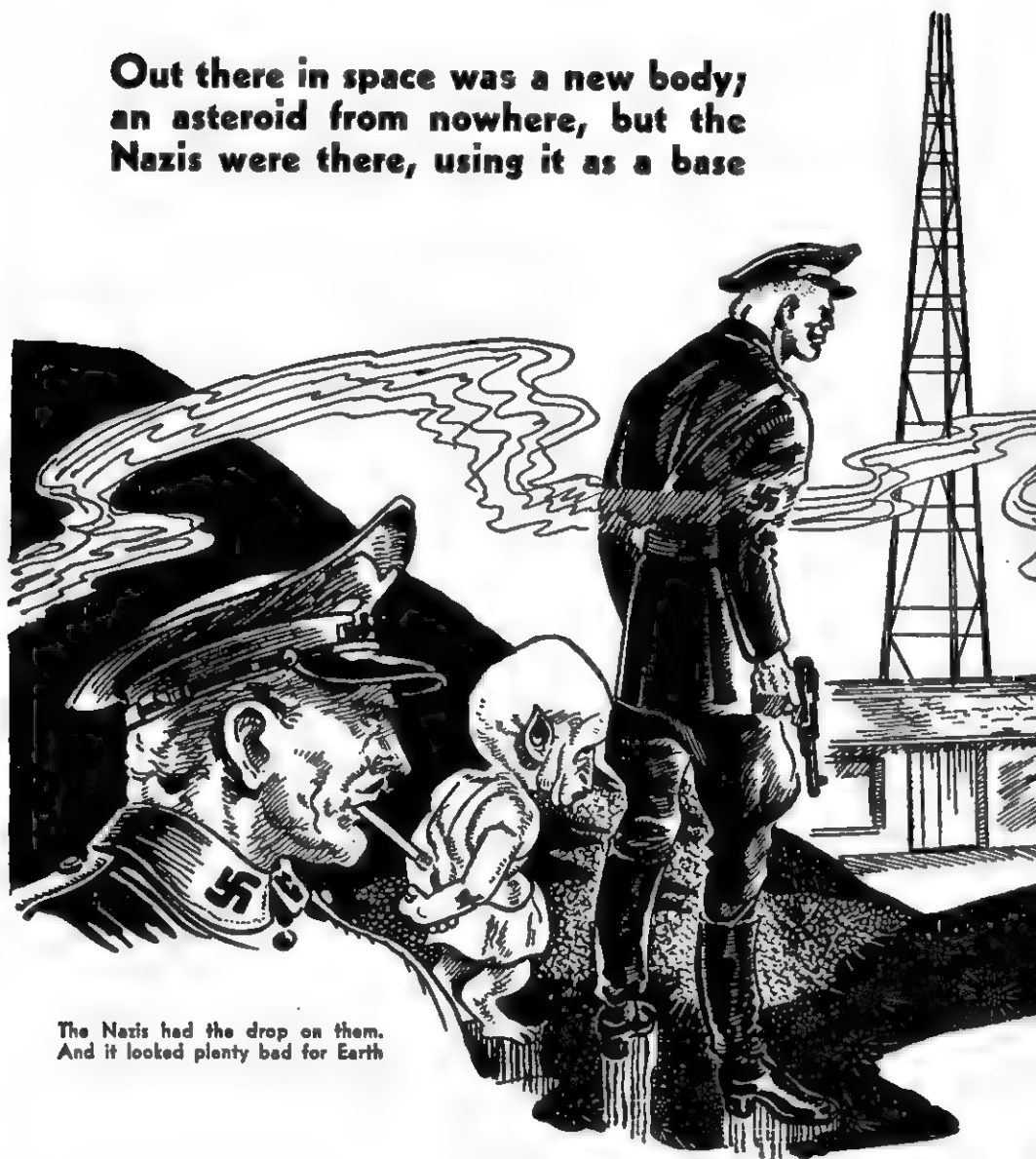
VICTORY FROM

by **WILLIAM P. McGIVERN**

and

DAVID WRIGHT O'BRIEN

**Out there in space was a new body;
an asteroid from nowhere, but the
Nazis were there, using it as a base**



The Nazis had the drop on them.
And it looked plenty bad for Earth

THE VOID...

COLONEL PARKER MOLLISON, bronzed, gray haired, gray moustached chief of the United States Army Air Corps Special Experimental Unit, smiled tiredly at the short, fat, middle-aged civilian who stepped into his office.

"Glad you were able to get here on time, Baldwin," Colonel Mollison declared. "It would be a shame to have to run off our tests without the man whose brainwork has had so much to do with them."

The fat little civilian called Baldwin grinned amiably, taking off his hat and

mopping perspiration from his bald brow.

"Didn't think I'd make those plane connections on time, Colonel," Baldwin said. "The way they rush them through these days a man has to be one-half race horse and one-half mathematical genius to figure out those schedules and catch the planes on time."

"Throw your hat anywhere," the colonel said, rising and reaching across his desk to grip Baldwin's hand warmly. "We've still fifteen minutes left before the tests." He waved his visitor to a chair beside the desk, then sat



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down again.

Baldwin took a seat, placing his hat on his knee. He fished into his vest pocket, found some cigars and held them forth to the colonel.

"Thanks, no," Colonel Mollison said. "Cigarettes are my folly."

Baldwin put all but one of the cigars back in his pocket. He peeled the cellophane from this, bit off the end, shoved it into his mouth. Flicking a kitchen match into flame with his thumbnail, the pudgy little civilian leaned back in his chair and leisurely lighted his cigar.

"How, are things in Washington?" the colonel asked.

Baldwin exhaled a cloud of blue, squinting through the smoke.

"Still battling heads against the stone wall presented by the radium problem. Where in the blazes our enemies are getting the stuff seems to be beyond anyone."

Colonel Mollison shook his head worriedly. "There's no question about

one fact. We had those dirty devils licked until they got that mysterious radium source. This damned war would have been over in '43, if they hadn't been saved by that factor."*

"They say that the German recapture of Paris, last month, was the direct result of a radium bomb they've developed to a crude efficiency already," Baldwin nodded.

Colonel Mollison's jaw was grim. "And the devils won't be using it so crudely pretty soon. Don't forget, it's only been a year since they developed that source, and look at the progress they've made in reconquering territory since then. I was in Libya when they brought out the first radium tank gun. We lost more than five hundred tanks before we were able to replate with lead. And in that time, we'd lost Libya again."

THERE was a moment of silence. Then Baldwin spoke.

"We'll have licked a great problem

* In the final months of 1943, after the successful establishment of a second front in Europe by the United Nations, a concentrated combined offensive, in the eastern theater of operations, on the Japs in Burma, Malaya, and the Philippines (which move was foretold by the initial recapture of Gona in the Solomons in December of 1942) and an overwhelming drive through Tripolitania and other Nazi-Italian held African territory, the Axis powers seemed to be on the verge of military collapse.

The tremendous American-British air offensive over Germany, which resulted in the collapse of the German attack on Russia just two months after the Japanese ill-timed thrust into Siberia, left the Red armies free to press in through Poland and drive deeply into Manchuko and other Jap-held territories in China.

The bloody uprisings against the Nazi government by the people of half-starved, downtrodden France, enabled them, in overthrowing the betrayers among them, to aid greatly in the Allied drive which liberated more than eighty-percent of their native soil from Axis control.

And in these final months of 1943 the Axis powers pressed into a last ditch fight for survival, suddenly brought to the battlefields the crude but effective weapons of radium warfare. These weapons, still in an experimental stage, were neverthe-

less so deadly that the tide of Allied victory was stemmed, then pushed inexorably backward as the supposedly beaten Axis hordes began a steady reconquering of territories previously seized by them.

Allied scientists, in possession of some of the captured radium weapons, knew well the secrets of their use and make, but this knowledge was of little use, inasmuch as the radium supply on Earth seemed impossibly scanty to supply even a fraction of the radium being used by the Axis. The United Nations were faced with the grim fact that somehow, from some unknown source, the Axis had tapped a seemingly inexhaustible fount of radium.

And even more grim was the realization that each passing day brought improvements in the now less and less crude version of radium weapons being sent to their fronts by the Axis. In spite of the fact that the greatest scientific minds on the side of the Allies were pooled in exhaustive research of every known natural element from which radium might be tapped, nothing had yet been accomplished in the frantic search.

Because of this, the Allied Nations—who had but a few months before considered themselves nearing inevitable victory—now faced the seemingly unshakable fact that chaotic defeat would soon engulf them.—Ed.

if those tests are successful today, however."

The colonel nodded. "Of course. Space fringe fighters and transports can't be matched by our enemies. Our entire problem of supply and transport will be solved. But we still will have their damned radium weapons to buck. And it will be a grave question as to whether or not your invention, magnificent as it is, will be able to swing the balance against the radium war the Axis is now fighting."

Baldwin nodded slowly.

"You're right, of course. We can only hope. Too, if the Axis scientists have been working space fringe transportation—and we have no way of knowing if they have or not—we'll find ourselves fighting another war many hundred miles above earth."

Colonel Mollison nodded wearily.

"Sometimes it seems endless," he said. Then his jaw stiffened, and his big hands clenched into fists. "But by God, man, it can't be. We'll drive them back into their holes for the rest of time!"

Baldwin looked wide-eyed at this change in the colonel. Then he smiled respectfully.

"If we inventors can carry on as doggedly as you fighting men, Colonel," Baldwin said, "there's no danger of democracy dying."

Colonel Mollison had relaxed, and now smiled wryly.

"Sometimes," he declared, "I find myself willing to trade anything to be back in the real thick of it. A desk job like this, vital or not, can play hell with a fighting man's nerves." He smiled broadly now. "I have absolutely no doubt about the rumor that my men at the base here call me 'Old Hell for Leather.' The way my nerves are at times, I must be pretty rugged on the boys."

Baldwin laughed.

"You'll probably find they love it, Colonel. They're a nice looking bunch, from what I saw of them in the short time since my arrival."

"Bright lads," Colonel Mollison said, "with guts." There was pride in his eyes. "You'll see what I mean when you meet Hawkins and Roberts, the two I've selected to make the test with your space fringe ship."

"They're good?" Baldwin asked.

"The very best," Colonel Mollison declared emphatically. "They make an inseparable combination. I wouldn't dare try to break them up. Been together since kids, I understand. Played in the same bunch, were on the same teams, worked on the same projects, when they were members of the American Boys' Commonwealth back in Chicago. They joined the Air Corps together a couple of years ago. Roberts, one of 'em, was a radio bug, and made a master sergeant's rating as a radio-man. The other, Hawkins, was a natural as a pilot, and won his wings as a second lieutenant. Through good luck, they wound up together after they'd both graduated. Once back together, the entire War Department couldn't have separated the two, even if it had wanted to."

"Unusual combination at that, eh?" Baldwin commented.

"Not a bit," the colonel replied. "The word unusual doesn't fit them at all. Terrific would be a much better one-word description."

The colonel glanced at his watch.

"They'll be rolling your dream child out from the hangars for warming up by now, Baldwin. Like to go out and look it over?"

The fat little civilian inventor grinned, nodding, and rose. Colonel Mollison, stepping back to let the inventor move in front of him, clapped a

hand affectionately on Baldwin's shoulder.

"We're counting a lot on those designs of yours today, old man," he said.

Baldwin nodded soberly.

"And I'm counting a lot on those two men you mentioned to prove those designs as reality, Colonel. From what you said, I've a feeling no one will be let down."

They left the office. . . .

IN FLIGHT Barracks Number Four, Second Lieutenant Jim Hawkins was clambering into the incredibly thick, electrically insulated fur flying costume which he was to wear for the test flight that day.

Hawkins was a tall young man, dark haired, lean jawed, and wide-shouldered. His eyes were gray, and at the moment were wearing an expression which was somewhere between grave solemnity and worry.

Sitting on a bunk across the room from where his companion struggled into gear, was a short, blond, cherub-faced young man who grinned broadly as he watched the procedure. This blond young chap, Phil Roberts, was already attired in a similar thick costume of fur, leather and electric insulation.

"Watch those neck straps, Jim," Sergeant Phil Roberts chortled disrespectfully to his buddy and superior officer. "If you don't look out you're gonna hang yourself on 'em."

Second Lieutenant Jim Hawkins shot his cherub-faced pal a look of mingled annoyance and affection.

"Quiet, Sergeant," Hawkins said drawlingly. "I'll have you planked in the guardhouse for that kind of mutinous disrespect."

Blond, cherub-faced Phil Roberts' wide grin grew even wider.

"Why, you long-legged stuffed shirt!"

he yelled.

In a split second Roberts had reached back and snatched a pillow from the bunk on which he was sitting. In another split second it was sailing across the room and into the face of the unprepared Jim Hawkins.

Hawkins had been balancing himself on one foot at that instant, pulling one leg into his thick flying suit. The result was instantaneous. The young lieutenant spilled back asprawl on his own bunk.

With a savage howl of happy triumph, the chunky form of blond Sergeant Roberts was across the room and atop his buddy. Then his fists were pummeling Hawkins good-naturedly around the chest and shoulders.

"Come on, stuffed shirt," Roberts chortled. "Say 'Yessir!'"

Young Lieutenant Hawkins' voice, muffled and half choked with laughter, answered after a minute or so.

"Yessir, yessir, yessir!"

Roberts climbed off, still chortling.

"That's better, pal," he told Hawkins. "That'll teach you not to get on your high horse."

Roberts turned away to step back to the bunk where he'd been sitting. And at that instant Hawkins extended one foot and shoved hard against Roberts' back, sending the other sprawling face forward to the floor.

In one leap the young lieutenant was atop his buddy's back, starting a "knuckle massage" on Roberts' blond hair.

"Yieeeee!" yelled Roberts.

"Never turn your back on a smarter man than yourself, you moon-faced, little blond monkey!" Hawkins instructed him triumphantly. "It always results in something like this. Also, don't pick battles with guys you know you can't lick."

"Like who?" Roberts' voice came in-

dignantly four inches from the floor.

"Like me!" replied Hawkins.

"Yahhh!" Roberts answered, unimpressed.

Still laughing, Hawkins rose.

"Now behave yourself, Sergeant," he told Roberts. "If I don't get into this gear, how'll you ever get more than five feet off the ground?"

HAWKINS resumed his dressing.

Roberts picked himself up in mock disgust and went back to sit on the side of the bunk. He surveyed his pal coldly for a minute, then grinned.

"You're a lucky guy, Jim," Roberts observed.

Hawkins was pulling himself into his thick jacket.

"How so?" he asked.

Roberts' grin grew wider again. "To have a first-class, rootin-tootin radioman like Sergeant Phil Roberts along with you," he said.

"Such modesty!"

"I cannot tell a lie, that's all," said Roberts.

Hawkins was into his gear now. He snapped the last chokes around the collar and started for the door.

"Come on, superman Roberts," he said. "You're going to have a chance to prove how valuable you are today."

Roberts followed as they stepped outside onto the flight field parade ground. He moved up beside his pal and they started off toward the hangars in the distance:

For perhaps a minute they walked along in silence, Hawkins' loose, long stride eating up ground while his companion's short legs hurried double-time to keep abreast.

On the other side of the flight field parade ground the rear of the big testing hangars were visible. These hangars faced the landing field proper, and both companions realized that at the

moment the ship they were to take aloft on its first test had been rolled out and was probably under inspection by at least a half dozen civilian big shots and double that number of high-ranking flight officers.

"You know, Jim," Roberts said at last, breaking the silence, "I always feel like I'm going on a blind date when we're ready for one of these trips."

Hawkins grinned at the analogy his chum had chosen.

"How so?" he demanded.

"Well, now take old X-80, waiting there for us now," Roberts said. X-80 was the official name of the space-fringing ship they were about to test. "Although we've been told everything about her, and studied all the dope on how to handle her, until we get off the ground, we won't really have ever actually known the dame. See what I mean?"

"I'm afraid you're an incurable romanticist, Phil," Hawkins told him. "But don't forget the pickle we'll find ourselves in if one of these flying blind dates ever lets us down."

"What do you really think about this X-80 baby, Jim?"

Hawkins shrugged. "Looks like a dream ship on paper, Phil," he answered. "And the loving care and attention the ship has had from our construction experts has resulted in a beautiful *looking* job. But you know as well as I do that there's only one answer to the question about the ship's ability to stand the gaff it was designed for."

"Yeah," Roberts answered soberly. "We're that answer."

Hawkins clapped him on the back.

"Hey there, chum. Don't grow sober. That's *my* job, and if you're sober, too, who'd ever cheer *me* up?"

Phil Roberts grinned up at Hawkins. His sudden chuckle was infectious; and

by the time the pair of test men had rounded the hangars they were both laughing hilariously, as if over some secret joke. But by the time they'd reached the crowd around the long, sleek, silver, winged bullet some fifty yards in front of the central hangar on the flying field, they appeared to be two brisk, efficient, unsmiling young men.

CHAPTER II

Out of Control

COLONEL MOLLISON had introduced the two young test flyers to the assembled civilian and military dignitaries, and they were now engaged in a last minute technical discussion with the test ship's inventor, Baldwin.

"You'll notice," Baldwin was saying to Roberts and Hawkins, but for the hearing of the others as well, "that there's not a great deal of difference between this ship and the very latest strata pursuit interceptors being turned out by the thousands every month. The shell of the X-80 has been additionally streamlined for the work expected of it, but a regular interceptor pursuit with strata capabilities for flight could be converted into a workable space fringe ship inside of an hour, if necessary, merely by replacing some parts and adding the basic changes incorporated into this test craft."

The inventor paused and looked around the circle. A faint, wry grin came to his lips, and behind that grin was grim hope. "If this test is successful," he added.

Colonel Mollison addressed one of the higher ranking military inspectors.

"You see, sir. That's what we're emphasizing. If this test is completed successfully, we won't have to wait to turn numerous factories into production

of similar ships. We'll be able to produce more crude equivalents of the X-80 merely through revamping our regular strata interceptor ships. Think of the time that will save until we can get the actual models coming off the assembly lines!"

The military inspector nodded gravely.

"Excellent foresight, gentlemen," he said. "And I can only join with the rest of you in hoping as fervently for the success of this test."

Colonel Mollison turned to Jim Hawkins and Phil Roberts.

"Lieutenant Hawkins, Sergeant Roberts, I wish you both the very best of luck. And I feel that if the X-80 will conquer the space fringe tests at all, it most certainly will with you two men in her cabin. Happy landings, gentlemen."

Hawkins and Roberts snapped their salutes crisply in answer.

Colonel Mollison extended his hand, first to Jim Hawkins, then to Roberts, giving them each a firm grip of farewell that said much more than words.

Hawkins was the first to the compartment door in the rear of the sleek silver bullet, but Roberts was right on his heels. Hawkins opened the door and stepped back solemnly to let his chubby companion enter ahead of him.

"Okay, fat boy," he muttered tauntingly, "squeeze in."

Phil Roberts' expression remained as appropriately solemn as that of his companion. But under his breath he muttered an answer.

"Okay, Alfonse, pearls before swine, if you like."

They slammed the hermetically tight compartment door behind them and marched up the narrow aisle to the control board and pilot section in the nose of the ship before either of the two said anything more.

Then it was Hawkins who spoke. He extended a gloved hand to his buddy as he did so, and his mouth was no longer laughing.

"Here's wishing us a lot of luck, pal."

Phil Roberts took his friend's hand gravely. But there was no mistaking the twinkle in his eyes.

"Here I've been testing ships with you for over four hundred flights," Roberts said, "and all of a sudden, on the toughest we've ever faced, you have to give me the jitters by admitting you've gotten by on luck all along until now!"

"Why, you—" Lieutenant Jim Hawkins began. And then he grinned. "Be nice, or I'll make you ride in the tail of this ship."

Phil Roberts' reply was cut off by the thunderous racket which started that instant in answer to his buddy's swift opening of the take-off throttles.

FOR an instant the great silver bullet seemed to shake from the very thunder of the racket, and then, with a shivering shudder, the craft shot forward from its blocks, and beneath them the long white field runway fell behind in a white streak.

The nose of the ship, under Jim's expert guidance, was tilting skyward so smoothly that the blue horizon seemed to fade into the green of the earth far below them in less than a few minutes.

Now the roar of the powerful combustion motors, which would carry them into the strata and as far as the first space fringes, had settled down to a steady, throbbing snarl. There was nothing but blue above and around them, now, the fleecy lower cloud formations having fallen away with the additional acceleration Jim was feeding expertly into the ship's motors.

Jim jabbed his finger at the instrument panel altimeter and grinned happily at his companion.

Glancing down, Phil Roberts' eyes bulged, and he turned an amazed expression to his buddy. His mouth opened and closed rapidly, his words being quite lost under the steady *thrumming* of their motors.

Jim grinned, and pointed to the inter-communications phones which each of them wore strapped to their chests. After a moment, they had both donned the headphones and chin cups for speaking.

"Think you could shout all that horsepower?" Hawkins grinned.

Roberts flushed. "I forgot. But what I was saying, before it occurred to me that you couldn't hear, concerned that altimeter. Is it telling the truth?"

"Sure thing. Truth and nothing but the truth, pal," Hawkins answered.

"But all this height, in so darned little climbing time—" Roberts began in awed amazement.

"I told you this baby was a climber from the minute those throttles opened," his companion broke in.

Roberts shook his head, as if still unwilling to believe this incredible phenomenon.

"Yeah, but I thought you were kidding."

Hawkins' expression became one of mock pain. He sighed.

"Sergeant Roberts, how often do I have to tell you that you will never live to see the day when I will tell an untruth. I, sir, have never said or done anything to mislead you."

Phil Roberts snorted. "Yah! How about that double date you fixed for me in Scranton?"

Jim Hawkins looked blandly innocent.

"Scranton? Scranton? Were we ever in Scranton?"

"You know darned well we were. On our last furlough. And it was there that you fixed up that double date. A

girl for each of us, remember?"

Jim Hawkins suddenly beamed recollection.

"Ahhh, yes," he murmured. Scranton. That's right. I did arrange for you to have a date. I believe I was feeling sorry for you, then, and made all the arrangements."

"All the arrangements!" Phil Roberts grunted bitterly. "Pah! You made all the arrangements, all right. You told me the girl you'd gotten as my date was a raving beauty. You said she looked like Ida Lupino."

JIM HAWKINS, trying not to grin, nodded soberly.

"That's right. And I wasn't lying. I said there was a certain resemblance between Ida Lupino and the date I'd arranged for you."

"Between my date and the wicked witch of Oz!" Roberts snorted. "But not between my date and Ida Lupino!"

"If you'll remember," Hawkins said, "all I told you was that there was a resemblance. I didn't say your date looked exactly like Ida Lupino, I just said *sort of like*. If you leaped to the wrong conclusions and got too optimistic, it wasn't any fault of mine."

"The only resemblance between the two was that my date was a gal, and so is Ida Lupino," Roberts said indignantly.

"Not at all," Hawkins corrected him. "It goes farther. Your date had the same color hair as Ida Lupino. She was about the same height. She had two eyes and, to the best of my knowledge, all of her teeth. She had a nose, and ears, and—"

"Bah!" Roberts cut him off disgustedly. "If that's your idea of a resemblance, you've certainly—"

It was Jim Hawkins who cut in this time. His voice sharp, commanding.

"Time for first radio check, Sergeant.

Snap to it. Give them the instrument readings on each of our check dials. You'll just have time to jot them down and send them through at the check-time they set."

"Right!" Roberts snapped. He brought forth his check tabs and began a swift recording of the test instruments on the panels. There was silence for perhaps two minutes during this examination. Then, as his companion, straightened up from his inspection of the test gauges, Hawkins added: "Give 'em in reading sequence. And add that we're still climbing clean. No trouble as yet. Insulators slipping off ice formations like a hot knife through butter."

"Right!" Roberts saluted, and clambered from his seat beside Hawkins. He went back into the narrow cabin aisle, turned off to slide in behind his radio instruments, compactly boxed into a side compartment.

Hawkins, at the controls of the ship, heard his companion's voice coming through a moment later.

"X-80, calling in. X-80, calling experimental field reception. Coming in with check data, first sequence."

There was a minute of silence, broken only by occasional static splutters, then the voice from the experimental field's radio post flooded in. Hawkins smiled in satisfaction and snapped off his receiving apparatus. . . .

IT WAS several hours later when Phil Roberts, returning to the pilots' compartment to slide into the seat beside his buddy, after having made his third check report to the field station, noticed that Hawkins' expression was now noticeably strained.

"Ease up a little, Jim," Roberts said quietly.

Hawkins turned, smiling briefly. "Sure, chum. We're just beginning to

hit the first atmospheric conditions which will eventually tell the tale. From now on in, the X-80 is going to hit hurdle after hurdle. I always get a little uneasy just before the real storms."

Roberts nodded. "If there aren't butterflies in *my* stomach, then I'm crazy," he admitted. "Lord, Jim, I know how you feel. But it's been smooth going so far."

"Right," Hawkins said briefly. "So far."

"How soon will it be before we begin relying on inventor Baldwin's brain-child solely?" Roberts asked.

Jim Hawkins glanced briefly at the altitude gauges, then at the chronometer panel.

"Not long, pal," he declared. "In just a little while Baldwin's rocket propulsion tubes will be in the thick of their toughest test."

Roberts fell silent, sighing and settling back in his seat. Jim Hawkins, however, didn't relax a muscle. The strain returned to his lean young features, and he squinted worriedly as if trying to pierce the heavy vapors of the atmospheric fog blankets everywhere around the heaven-hurting craft.

He turned his attention frowningly to the insulator gauges. They were flickering just a trifle now, the first uncertainty yet shown on their surface. That meant ice formations were taking hold for the first time—even though but minutely.

Roberts noticed his companion's glance.

"Definitely skating weather outside, eh?" he observed quietly.

Hawkins nodded. "Looks like. We'd better stop breathing this ready-made ozone inside the cabin, and take to the gulp tanks for a spell."

Roberts nodded, and the two adjusted their oxygen breathing masks,

tubing them to the prepared tanks below the instrument panels.

Now communication between the two was limited to gestures, due to the necessity for conserving oxygen and energy. An hour passed, followed by another. And at last Jim Hawkins turned to his companion and raised his hand in a brief signal.

With a gesture that was lightning swift and excellently timed, the young lieutenant leaned forward, pushing hard on the motor throttle with his right hand, and simultaneously opening wide the rocket throttle with the other.

FOR an instant, as the *thrumming* motor was cut off in a coughing choke, the nose of the climbing silver bullet seemed to lose speed. And then, in the next fraction of a second, the full fury of the rocket propulsion tubes blasted thunderously to life and the acceleration of the ship climbed to double its previous rate.

Hawkins turned from the instrument control panel to Roberts. The other had put both hands over his masked face in a gesture which was obviously significant in view of the fact that he'd crossed fingers on each hand.

Now Hawkins thumped his pal on the back. Roberts took his hands away from his masked face and uncrossed his fingers. Hawkins touched his own mask, to indicate a temporary respite from the gulp tanks. Gratefully, Roberts followed his buddy's lead and removed his oxygen mask.

The expression on his companion's face, suddenly revealed by the removal of the mask, was enough to send Jim Hawkins into a brief spasm of laughter.

Roberts' face had been sheet white, and was only now regaining color.

"Look who was bucking up *my* morale, not so long ago!" Hawkins laughed.

Phil Roberts' cheeks were a ruddy pink. He grinned, abashed.

"I don't mind admitting guilty to that charge, chum," he confessed. "You at least had something to occupy your hands and your mind when we made that perilous power switch. All I was able to do was sit and watch!"

Jim Hawkins' laughter had subsided. But he still grinned.

"Well, anyway, Sergeant, we made it. Now you can go on living, if you like. Look at our acceleration gauges, brother, if you want to see speed recorded. We're hitting toward the space fringes, and no denying it now! Radio another check and all new info to the field station. This is something to send back and cackle over!"

Minutes later, now using wireless key, Phil Roberts was pounding out the last check readings to the experimental field's station, and Jim Hawkins, at the controls of the hurtling silver bullet, had lost much of the strained tension that had been evident before in his expression. For along with entering into the first space fringes, the switch from motor to rocket propulsion power had been one of the toughest hurdles Hawkins and Roberts had figured on facing. The slightest error in making the switch could have resulted in either of two tragedies—a loss of climbing speed and an almost certainly fatal spin, or an injudicious sudden combination rocket and motor-power mix which would have put such strain on the X-80 as to rip it asunder in mid-flight.

But that was past, behind them, now. And Phil Roberts, as he came back from his radio compartment to slide into the seat beside his companion, was grinning cockily, almost triumphantly.

"The rest of our fears are little ones, chum," Roberts grinned. "We'll take 'em in stride—just as if we were hitting along at forty thousand feet in-

stead of Lord knows how many miles."

Jim Hawkins favored his companion with an understanding grin. But his brows furrowed ever so slightly, and he said "Don't count your chick—"

Hawkins, glancing casually at the instrument direction panels as he spoke, chopped off his sentence, unfinished, with an oath.

ROBERTS, startled, glanced down at the directional instruments also.

"What in the—" he began.

"That's what I want to know, and quick!" Hawkins snapped. "Unless those directional gauges have gone haywire due to the increasingly thin atmosphere—"

"We're sliding off our charted course line at the rate of, no—we *couldn't* be!" Phil Roberts cut in excitedly.

Jim Hawkins looked up tensely.

"Those gauges are sound," he said. "They're telling the truth. We're being sucked up, and off of our course at a velocity that is positively unbelievable!"

"But to where?" Roberts demanded. "And how can we hit back on our course line?"

Jim Hawkins shook his head after a brief, futile effort to pull the craft forcibly away from the sucking stream. "I don't have any idea, pal," he muttered tightly. "But you'd better pick a destination you'd like, and pray for that to be it!"

Roberts was climbing out from behind the instrument panels, his features a taut mask.

"I'll get to the key," he declared, "and send out the glad tidings to the field station. Maybe Baldwin, this ship's daddy, can give us a tip on pulling her out of this mess!"

Moments later, Phil looked up and shouted the additionally grim information to Jim.

"We're walled in by the slip stream. Not a chance of a spark getting out. We might as well be talking to one another. It's a sure bet we're not going to talk to the gang back on the ground until we're free of this upsweeping whatchm'callit!"

"I think I know what to call it!" Hawkins answered tightly. "It's a slip stream, all right, and it's dragging us hell bent toward the Heavyside layer. Every second brings us closer to that instant when this ship'll be spinning like a—"

Jim Hawkins' sentence was cut short by the very circumstance he was about to warn against. The X-80 went into a sudden convulsive whirling spin, throwing both Hawkins and his companion heavily to the floor of the cabin and pinning them there like flies through gravitational force.

Phil Roberts had struck his head against the radio panel as he was hurled to the floor, blotting consciousness instantly from his brain. But Jim, in spite of the incredibly tremendous velocity of their spiraling upward rush, had not lost consciousness. He was aware, therefore, that the ensuing moments, or perhaps hours, most probably drew them both to certain death.

Jim lost all track of time, of motion, of being, in the interval that followed. And it was the sudden slow-up in the spin speed of the craft, plus an inexplicable sensation of falling, that made him open his eyes. Something had happened, something completely different than what he had expected. The X-80 had not been crushed egg-like in the slip stream, and the very velocity and angle of the stream was now changing.

Laboriously, fighting with every sinew against gravity, Jim began a crawling, half-climb through which he eventually gained the thick forward

observations panels of the X-80. It took him a minute to wipe the blurred fog from his mind, and then he blinked out into what seemed to be a rich-blue darkness illuminated only by a round, shining, crystalline ball toward which they were hurtling with incredible speed.

For fully two minutes, Jim stared numbly, unbelievably, at the phenomenon.

"No," he choked. "It couldn't be. That couldn't be an asteroid we're hurtling down onto!"

DESPERATELY, Jim pulled himself across the seats before the control panels, his hand seeking the rocket propulsion throttle. There would be a crash coming in a matter of mere minutes. And a cut-off on that power might give them a fighting chance to survive it.

His fingers found the throttle, and he shoved it hard down, almost losing consciousness from the exertion against gravity. The thunderous vibration from the rockets ceased, and for a moment, Jim fought off blackness that returned in a swift wave.

Minutes now. Minutes. Phil. Where was Phil? On the floor. Cabin floor. Get to Phil. Make sure he's all right. If he's out he'll get knocked silly by crash. Get to Phil.

But Jim didn't reach his companion's side. He was scarcely able to cover another yard in the five minutes that followed. And in the minute that followed that, the crash came—roaringly, deafeningly, jarringly.

Jim knew only the shattering numbness of concussion for the first instant. And then he realized that the gravitational pull was gone, and that he was being hurled forward by the force of the crash, as the X-80 nosed into the unknown asteroid. . . .

CHAPTER III

Radion!

JIM HAWKINS did not lose consciousness. For one crushing blinding instant as the nose of the space fringe fighter buried into the yielding crust of the strange gleaming asteroid, he felt himself slipping into a bottomless well of darkness—but with a supreme effort of will he tore the settling veil of oblivion from his eyes.

A vast stillness had settled over the ship; the rending shriek of straining metals had faded quickly; the roaring throb of the powerful motors was stilled forever.

Jim staggered to his feet, conscious of the splitting pain that knifed through his temples. Dazedly, he raised his hand to his forehead and felt the congealing thickness of oozing blood. With an effort he shook away a feeling of nausea, and stumbled toward the radio apparatus, where Phil's limp body was sprawled.

It took all of his strength to drag his friend's body to the aisle of the ship. A hand of cold fear closed over his heart as he felt desperately for a pulse in the limp wrist.

"Phil, guy," he said tensely. He raised the blond head from the floor and cradled it in his arms. "It's me—Jim. Please—say something!"

One of Phil's bland eyes opened slowly. He studied Jim for an instant and then shook his head groggily from side to side.

"Okay," he grunted. "Anything in particular you want me to say?"

Jim felt a vast relief sweep over him.

"I should've known it'd take more than a power crash to put you out of action, you big baboon," he said feelingly. He dropped his friend's head to the floor of the ship. "But you had

me scared for a minute."

Phil grinned and rubbed the back of his head.

"Fine way to treat a crash victim," he said. He sat up and felt his arms and legs experimentally. "I guess we're both just too lucky to die. Where the devil are we, anyway?"

Jim stood up and a worried frown settled over his face.

"Your guess is as good as mine," he said. "When we hit that suction spiral we were jamming pretty close to the Heaviseide layer. I can't remember much of what happened, but I think we blasted right out of Earth's atmosphere."

Phil whistled softly.

Jim said, "I think a reconnaissance party is in order."

Phil looked at him soberly. "I'm kind of curious myself, chum. You know," he grinned suddenly, "we might be just about anywhere. Maybe we're dead and in Heaven."

Jim looked about the shattered interior of the ship and touched his hand to the bloody bump on his temples. "If we are," he muttered, "you can put me down as one disillusioned guest. If we're ghosts we're the livest ones I've ever heard of."

Phil hoisted himself to his feet.

"We can't be in Hell," he said, "that's for sure."

"What makes you so positive?" Jim asked.

Phil grinned. "I don't see any Nazis around."

"You got something there," Jim said. "Now let's get out of this wreck, if we can."

THE nose of the ship, weighted with heavy motors, had dug deeply into the surface of the strange asteroid, and the ship was suspended at a sharp angle. The hermetically sealed door in

the side of the ship was close to the tail, and the two men were forced to scramble up the aisle, clinging to whatever support they could find, in order to reach the one exit.

The crash, Jim discovered when he reached the door, had twisted the steel-ribbed structure of the ship, jamming the door tightly. He slammed his heavy rock-hard shoulder against its smooth surface twice without avail. The door was as unbudging as if it had been part of the solid side of the plane.

Panting, he settled back on his heels and studied the door. "A neat mess," he muttered to Phil.

Phil slid back down to the front compartment of the ship and returned shortly with a short powerful claw bar.

"If this doesn't do it," he said, "we can plan on spending the duration here."

Inserting the tip of the claw under the edge of the door he shoved with all his strength. The door creaked and gave slightly, but it did not open. Jim wrapped his big hands about the bar, alongside Phil's.

"Let's try it again," he said.

With a lunge they hurled all of their weight and strength against the budged door. It gave suddenly, snapping open with a protesting groan.

Jim and Phil fell forward as the bar gave beneath their weight. Phil rolled down the angled aisle, a tangle of arms and legs; but Jim managed to catch himself in time to avoid a spill.

Phil crawled to his feet, a ludicrous expression of bewilderment on his face.

"That's what a guy gets for exerting himself." He glared accusingly at Jim. "A fine thing! You take it easy and I take the spills. Some friend!"

Jim grinned. "I can't help it if you're clumsy," he said. He stuck a hand down and helped Phil to crawl back up the aisle.

"Are we ready to go now?" Phil asked.

"There's nothing to stop us," Jim said. "I'll go first. You follow me immediately and keep your gun handy."

With a lithe twist he slipped his body through the bent doorway and peered downward. The drop to the ground was almost ten feet.

He turned and grinned at Phil.

"Here goes nothing," he said.

Phil gripped his shoulder tightly. "Luck," he whispered.

Jim swung his legs out and dropped to the ground. He landed in a crouch, every muscle tensed. The shadow of the plane covered him, but his right hand was tightly closed on the butt of his gun. He was taking no chances.

"How's it look?" Phil called from above him.

"Can't tell yet," Jim answered. "Come ahead."

Phil swung out from the plane and dropped to the ground. His short legs buckled at the impact and he tumbled forward. He picked himself up, fuming.

"I just can't do anything right," he muttered.

"You got down, that's the important thing," Jim said. "Keep your gun handy. We're going to do a little scouting now."

TOGETHER the two men moved out from the shadow of the plane. Their eyes swung about carefully and the guns at their sides were ready for instant use.

"Holy Gee!" Phil said in awe. His gaze moved slowly, incredulously over the terrain that spread about them. "I've never seen anything like this in my life."

Jim Hawkins didn't answer. There was nothing he could say, no words at his command that would describe the

blindingly magnificent scene he was facing, or the tremendous impression it made on his senses.

The ground at their feet was as brilliantly bright as a vast field of diamonds, and the rays of the sun slanting through the strangely thick atmosphere of the asteroid, transformed this ground into a scintillating, million-pointed carpet of glory that stretched away as far as the eye could reach, swelling in ordered undulations until it merged indistinguishably with the far distant horizon.

The atmosphere was dense and heavy, swirling with a soft cloying mist.

Phil coughed as he drew in a deep breath of the heavy, misting atmosphere.

"This atmosphere seems kind of peculiar," he said, shaking his head. "I wonder if it's going to be all right for us."

"I think so," Jim said. "It's heavier than Earth's but it doesn't seem to have any toxic elements. That isn't going to be our problem. Our big job is to find out where we are and how we can get back to Earth. This place doesn't seem to be inhabited."

Phil nodded. "That's understandable. Who'd want to live on a place like this?" He blinked his eyes against the brilliance of the radiations that seemed to emanate from the gleaming ground. "It'd be about like spending your life in the glare of an anti-aircraft beacon. Maybe this'll teach us to appreciate black-outs when we get back to Earth."

"'When' and 'if'," Jim said. His gray eyes were troubled as they swept over the incredibly bright ground, that seemed to stretch away into infinity. "I wonder what causes this peculiar iridescence." He scraped at the crystalline particles with the tip of his boot. "These crystals look just like free ra-

dium, but of course they couldn't be."

"Why not?" Phil asked. You're thinking in Earth terms and standards now. What might be absolutely impossible on our own planet could be normal here." He looked down at the gleaming ground and scraped it with his foot, as Jim had done. "Why couldn't this stuff be radium?"

"We wouldn't be alive now if it were," Jim said. "The emanations from free radium, in quantities like this, would burn our tissue to crisps in a matter of seconds."

Phil frowned. "I guess you're right. I hadn't thought of that. Well, whatever the stuff is, it ain't easy on the eyes."

Jim's hand had fallen away from the heavy gun at his side. There didn't seem to be any need for weapons on this barren, brilliant isolated asteroid.

"Well, what do you think?" Phil said.

"About our chances?"

"Yeah."

JIM frowned and studied the sweeping glare of the horizon with troubled eyes. "Can't say yet. But things don't look particularly good. We'll have to make a complete investigation. We may stumble on to something that way. Until then, we'll go awfully slow on our rations and hope for the best.

Phil snapped his fingers suddenly.

"How about the radio? Maybe we can contact Earth and explain what happened. They might be able to get another plane through the same way we did." His round face was flushed with excitement. "They wouldn't have to risk a pilot. They could direct it by radio control and take their directional bearing from our beam. That way they could get supplies and equipment through. And maybe a radio-controlled plane could make a safe landing, where a pilot would be

knocked out by that suction stream. It's worth a chance, isn't it?"

"Sure it is," Jim said. He hadn't thought of the radio until Phil had mentioned it. "But how about your equipment? It might be out of commission from the crash."

"If it is, I'll fix it," Phil said jubilantly. "All I need is a piece of wire and a cotter pin and I could repair the dynamos at Boulder Dam. Come on, let's get to work. I got a hunch we're going to beat this deal. Why, I'll bet we're back on Earth for supper!"

Jim tensed suddenly as he heard a faint scraping sound behind him. A voice, soft and thick, sounded in the air.

"I do not think so!"

Both men were standing with their backs to the wrecked plane. The voice came from behind them, from the direction of the ship.

Jim wheeled about, his hand streaking toward the gun at his hip. But he never completed that gesture. His arm froze in a paralysis of stunned amazement as he saw the three figures standing by the ship.

They were small, oddly formed creatures, with bright snapping eyes that stood out with startling clearness against the dead whiteness of their thick coarse skins; their heads were huge and bald. In the center of their intelligent faces were wide spatulate appendages that apparently were noses. These hung down, almost meeting the small round holes that served the strange creatures as mouths.

But even more paralyzing than the appearance of these suddenly materialized creatures, were the heavy revolvers they held in their small, claw-like hands, and trained unwaveringly on the two American fliers.

"Do not make sudden moves," the tallest of the three creatures said, step-

ping forward a pace. His voice was curiously soft and thick; but it was the unmistakable accent of the words, guttural and throaty, that Jim Hawkins recognized with an unbelieving gasp.

"I do not wish to kill you," the strange creature said. "Not now, at least. After what you have done to my people I should kill you without mercy, but I have other plans."

Jim's eyes dropped to the guns in the hands of the weird creatures. Phil followed his glance.

"It isn't possible," Phil whispered hoarsely. "This is something we're dreaming."

"I don't think so," Jim Hawkins said.

THE completely weird scene was like something from the half-forgotten depths of a hideous nightmare. The brilliantly gleaming ground cast a pale aura of unnatural light over the incredible creatures that had materialized, seemingly from the murky swirling atmosphere. Silhouetted against the shattered hulk of the once-trim American strata fighter, they looked like evil gnomes from the pits of Hell.

But there was something in the scene even more incredible and menacing than the appearance of these inhuman creatures; and that was the fact that in their small, claw-like hands were held German Luger revolvers; and that their soft stilted speech was tinged with the unmistakable guttural growl of a German accent!

Jim's jaw went slack in amazement. Forgetting everything, including the obviously hostile intention of these strange creatures, he wheeled to his companion.

"Good Lord, Phil!" he gasped. "Those guns. Lugers. Nazi pop-toys! On this god-forsaken little asteroid—

are Germans!"

But Phil had noted the weapons also, and his eyes were round with incredulity. He opened his mouth to answer, but couldn't find words to express his amazement.

"Phil—realize what that means!" Jim choked. "On this asteroid in space are Nazis—the lousy swine are ahead of us; they've beaten the Allied Nations to the punch! Somehow, they've conquered space!"

Phil Roberts finally found voice.

"They can't have!" he groaned. "Maybe there's some other explanation to this. These squatty little devils are speaking English, remember that. Hell, they might have gotten those guns—"

Jim cut him off.

"English with a Nazi accent, brother. English as Axis as a concentration camp. Explain away that!"

The creature who had stepped forward, obviously the leader of the small group, now interrupted his captives angrily.

"Do not talk," he said. "You will come with us. If you attempt to resist you will be shot instantly. You see, we have learned some things from you."

Jim pointed at the gun in the creature's hand.

"Where did you get that gun?"

A fleeting expression touched the broad blank face of the small creature. It might have been a smile or it might have been a frown; it was impossible to tell.

"Those who once used these weapons have no further use for them," the creature said.

"Who are you?" Jim asked. He knew he was taking a chance in questioning this creature; he might be answered by a blast from that grim Luger; but there were things he must know.

"My name is 'Dexlon,'" the creature answered. "And I find that you are talking too much. There is nothing more to say. Advance, and keep your hands away from your sides."

Jim shrugged. "Come on," he said to Phil, from the side of his mouth, "they've got all the aces."

WITH Phil at his side he walked slowly toward the three strange creatures. When they were within four feet of them, Dexlon held up his hand.

"That will be enough." He motioned to the creatures beside him and they stepped forward quickly and removed the gun belts from Jim's and Phil's waists.

One of the creatures stepped behind them and pointed a Luger at their backs.

"You will follow me," Dexlon said. "You will die instantly if you attempt to resist."

"Okay," Jim shrugged, "you're calling 'em. But something is as screwy as the very devil about this set-up."

"You said it, chum," Phil muttered, as they set out across the vast, gleaming wastes, following Dexlon and his companions.

They were unpleasantly aware of the creature who strode behind them, Luger in hand.

CHAPTER IV

Hostages!

FOR approximately half a mile across the gleaming barren wastes, Dexlon led the two American flyers. Phil and Jim said nothing during this trek; there was nothing to say. They could only await whatever developments were in store for them.

Finally Dexlon stopped and raised

his hand. The party came to a halt. Jim saw that they were at the mouth of what appeared to be a narrow tunnel leading into the ground. The aperture was so cleverly camouflaged, however, that a person could pass within a few feet and be unaware of its existence.

The creature who had marched beside Dexlon disappeared down this tunnel. In a few minutes he was back. He gestured to Dexlon. Dexlon turned to them.

"You will follow me again," he said, and started down the narrow tunnel-way.

The creature at their back motioned them down the tunnel with the Luger and there was nothing they could do but obey. At the first turn of the descending corridor, the brilliant light from above faded and was replaced by a softer illumination that seemed to radiate from the smoothly hewn walls.

For several hundred yards they followed Dexlon's small figure, as it turned and twisted, criss-crossed and back-tracked through an interminable maze of labyrinthine corridors.

Eventually the small leader of the strange creatures stopped and opened a smoothly fitting door. He stepped aside.

"You will enter," he said. "You will be confined here until I talk with your people and learn what they are willing to offer for your release."

"Now just a minute," Jim said, "you've been doing all the talking and it's about my turn now." He stepped forward, disregarding the gun in Dexlon's hands. "Who are these 'people' you're going to see about us? What kind of game are you trying to run? We don't know a soul on this God-forsaken place, and you know it. We're from America; we landed here by accident and we'd like to get away as soon as possible. I don't know who

or what you are, but," his glance flicked to the German Luger in Dexlon's hands, "I know darn well you've been in some pretty rotten company."

"Your pretense of ignorance will gain you nothing," Dexlon said. "Your people came to our land three years ago and they have made slaves of the free people of Radion. We who have managed to escape their domination are fighting you with every weapon at our command. We surprise your kind when they are travelling in small groups, take their weapons and kill them without mercy. We would have done the same to you, but I have a different plan in mind."

JIM felt a strange excitement coursing through him. All the answers to this mad situation seemed very near at hand.

"These people you speak of," he said, "is it from them you got those guns? Is it from them you learned to speak English?"

"Yes," Dexlon said. "They forced certain of us to learn their own language and the tongue you speak now. But you know well of these things. We waste time talking of them."

"These people call themselves Germans, don't they?" Jim demanded.

"Yes, that is their name," Dexlon said. "And you are of the same mold. Your people have enslaved us and killed and tortured those who would resist."

"You've got us all wrong," Jim cried. "For God's sake, you've got to listen to me. We are from America, from the same planet that these Germans came from, but we are not their friends, we are their sworn enemies, even as you are. On Earth we are fighting them with every weapon at our hand, just as you are. There, they have enslaved great masses of people and are forcing

them to labor as slaves, even as they enslaved your people. They must be destroyed; they must be absolutely wiped from the universe. You must let us help you in your fight against them. We have learned many things about their tactics; we—"

"Enough!" Dexlon cried. "Do you think we believe your lies after what we have learned of you? You would swear to anything to save your miserable lives. We know that you are without honor, without truth, without scruples or conscience."

The gun in his small hand waved grimly toward the open door.

"Enter, before I forget my plans and destroy you now."

"But you've got to listen to me," Jim blazed. "Can't you see I'm telling you the truth?"

"He's on the level, mister," Phil put in. "You've just got to give us a chance to fight these Nazis here. Why —"

"Silence!" Dexlon said quietly. "I am losing my patience. I have given you your orders. I believe not your lies. If you do not enter your cell immediately I shall give the signal to my men to shoot you down like dogs."

Jim Hawkins stared into Dexlon's startlingly clear eyes and he knew the strange creature meant precisely what he said.

"There's no use arguing," he muttered to Phil. "They hold the whip hand now."

With a shrug he turned and entered the small cell. Phil followed him, grumbling under his breath. The door closed quietly, inexorably, behind them.

The cell was hardly six feet square. There were two bunks, one on either wall and ventilation was furnished by a small barred aperture in the ceiling. From the walls emanated the soft mel-

low illumination they had noticed in the corridors and it cast a lambent glow over the rude furnishings of the tiny cubicle.

"WELL, if this isn't a pretty mess," Phil muttered, seating himself on one of the bunks. "These queer little nuts think we're Germans. That's the funniest thing I've ever heard."

"It may not be so funny," Jim said soberly. "The Germans are not here to play parlor games, that's for sure. When they learn that two American fliers are poaching on their reserves, you can guess what their reaction will be."

"But what are the Germans doing here in the first place?" Phil asked. "And how'd they find this asteroid? And where do these little fellows fit in? It's the darndest muddle I've ever seen, and I've seen plenty of 'em."

"I think I can answer some of your questions," Jim said thoughtfully. "There are still a lot of things I don't understand but the general outline is becoming pretty clear."

"All right, then," Phil said, leaning back in the bunk, "What are the Germans doing here?"

"This is just a guess, but I think that this asteroid, which our little friend called Radion, is a tremendously fertile source of free radium. And that answers your question. The Germans are here plundering that store of radium."

Phil leaped to his feet at the words spoken so softly by his companion.

"My God, Jim, you don't mean that you think this spot, this tiny blob in space is the mysterious source of the Axis radium supply!"

"Yes," said Hawkins quietly. "I'd stake my life on it, even though said life isn't worth a Nazi nickel at this instant. The Boche swine must have

stumbled on this source almost two years ago! Maybe they stumbled onto it from their experiments in space flight, I don't know. But the fact is, that once they'd done so, they lost no time in realizing what they had their hands on. The first crude radium weapons must have been hurled against our troops in less than six months after their taking over this radium planet!"

"Then this place must be lousy with Nazi rats!" Phil exclaimed.

Jim Hawkins shrugged. "Perhaps so. Perhaps not. I have a hunch that damned few of the Huns on Earth themselves know where their highly incredible supply of radium is coming from. Can't you appreciate how vital it would be for them to keep the truth about their radium source from falling into the hands of the United Nations?"

Roberts nodded.

"Damned right I can. Why, if any of our own scientists even imagined that the source was here, in proximate space to our own universe, they'd take their attention from all their present experiments and concentrate on space-flight experimentation."

"Right," Jim said excitedly. "And that's why I have a hunch that there are damned few Boche on this asteroid. Maybe no more than enough to control the mining of the radium deposits and keep what's left of the native guerillas under control. Can't you see that if more than a few handfuls of Axis snakes knew their own radium secret that United Nations spies and operatives behind their lines would sooner or later pick up that very vital information?"

PHIL ROBERTS bit hard on his underlip.

"I didn't think of that angle, Jim. But it sure as hell sounds logical."

"They can risk garrisoning this tremendously vital discovery of theirs with

such a relatively slight protection force," Jim went on, as if assuring himself of the solidity of each step in his logic. "They can risk it simply because they figure United Nations scientists, as busy as they are with efforts to crack the radium nut from research into all natural matter on Earth, would never waste time in experimentation with space flight now."

"But Baldwin did!" Phil Roberts explained. "At least he went to work developing the space fringe fighter, the X-80 that brought us here. And sheer chance took the X-80 out of the space fringes and whipped us into space proper, crashing us on this asteroid. Good God, Jim, could you feature the colonel's face if he knew what in the hell had happened to us, and where we are now?"

"The United Nations *must* know what happened to us, and what we've learned, Phil," Jim said desperately. "Even if we never return to Earth ourselves. And we've got to figure out how we can get this dope back to Earth. This is the radium source of the Axis—I'm positive!"

Phil suddenly frowned, as if stricken by a sudden doubt which had not previously occurred to him.

"Yet, if it is, didn't you tell me that humans couldn't stand the barrage of emanations from free radium?" the radioman demanded.

Jim frowned and stared thoughtfully at the softly glowing purple light radiating from the walls.

"Ordinarily it would be impossible for any human being to stand such a concentration of radium rays, but I think the Germans have treated the atmosphere in some way to nullify the normally toxic effects of the radium."

"Granting that," Phil said, "but how'd they get here? And how do they get the radium back to Earth?"

Jim stood up and jammed his hands into the pockets of his breeches. A dark frown settled over his features.

"Those are things we're going to find out," he said quietly.

"How?" Phil asked.

"There's got to be a way," Jim snapped. He began pacing nervously, his jaw grim. "There's got to be a way," he repeated desperately. "The Germans' use of radium in the war on Earth for a couple of years has brought the United Nations to the brink of defeat, and only a revelation of this tremendous secret will avert that defeat. We can't fail, Phil. We can't! Since their source of supply is here, on Radion, they must have a way of getting it back to Earth. Dexlon confirmed the fact that they have been here for several years. I'm almost convinced they discovered this planet, as we did, by accident. But how they've taken advantage of that accident!"

HE PACED the floor for several minutes, his features dark with worry.

"They've done the same thing here that they've done in every country they've conquered," he went on, "They've subjugated the people, made a slave race of them and forced them into bondage as slave labor. Some of the inhabitants of Radion—like Dexlon—haven't submitted, have gone on fighting, just as the Poles and the Free French and the Yugoslavs have continued the fight. These creatures who captured us are guerilla fighters, doing what they can to break the hold of the Germans over their people."

"That all makes sense," Phil said, "but we're right behind the eight ball. These little guys think we're Nazis. How can we do anything to help them, as long as they've got that idea in their noggin?"

"I don't know what we're going to do," Jim Hawkins said determinedly, "but we've got to do something!"

"Another thing," Phil said, "that little guy made a crack about us being redeemed by the Germans. What do you suppose he meant by that?"

"I don't know," Jim said. "Possibly Dexlon has some plan in mind to strike at the Germans by using us."

"That doesn't sound very healthy for us," Phil said worriedly. "You know what will happen when the Germans get their hands on us."

"I know," Jim said briefly. "We wouldn't stand a ghost of a chance. Whatever happens, we can't let ourselves fall into the clutches of the Germans. But there's nothing we can do now, so we might as well try and get some sleep. We're going to need all our strength when our chance comes."

"I don't think I'll be able to sleep," Phil said. He yawned and lay back on the cot. "I've got too much on my mind." He closed his eyes. In a moment he was snoring.

Jim smiled down at the recumbent figure, then he stretched out himself and relaxed. Despite his weariness, he wasn't sure that he could sleep. He closed his eyes. . . .

THEY were awakened by the opening of the door. Jim opened his eyes first and sat up. Dexlon was standing in the doorway regarding them inscrutably. He held a gun in his small hand.

"Everything has been arranged," he said, in his soft precise voice. "You will follow me."

Phil sat up, rubbing the sleep from his eyes.

"What's been arranged?" he demanded. "What's going to happen to us now?"

"You shall not be kept long in sus-

pence," Dexlon said. "The leader of our tribe, the noble Aton, has been imprisoned by your people since they arrived. His imprisonment has broken the spirit of resistance in our people. They are afraid that their actions might cause him more suffering, and so they are afraid to strike back at their captors. But I have just come from the central camp of your people. And through an intermediary I have made them a proposition which they have been happy to accept."

"What proposition was that?" Jim asked.

"An even exchange," Dexlon said, "Aton, our leader, for you two. Your people were most interested in you. When they learned of the markings on your craft they became very excited. And they agreed to our terms without the slightest hesitation. They seemed very happy."

Jim's thoughts raged bitterly, sickly, impotently. Of course the Nazis in charge here would be delighted to get the two American airmen who had stumbled on their source of radium.

"You fool," he blazed despairingly at Dexlon, "you don't know the truth when you hear it. And what makes you think the Nazis will keep their promises? You've been taken in for a sucker, that's all."

Dexlon moved the gun slightly toward the door.

"I am not interested in discussion," he murmured. "You will please follow me at once."

THE exchange place which Dexlon had selected was in the middle of a sloping valley. There was only one entrance to this valley and the approaches to this passage had been thoroughly scouted by his men before his small party entered the valley.

At the exact center of the low in-

cline, two German officers were waiting, and with them was a small, bent figure a creature of Radion, with a calm tranquil face and eyes as blue and clear as the sky in May. Obviously this was Aton, the exchange hostage.

Jim Hawkins and Phil Roberts were led forward to this meeting place. The German officers smiled slowly when they saw the American fliers.

"Welcome," the ranking German officer said with soft sarcasm. "Permit me to introduce myself, Oberleutnant Herr Bruno Schiller, and my invaluable aid, Leutnant Mueller."

The two German officers bowed mockingly.

"And tell me," Oberleutnant Schiller murmured, "whom do we have the honor of receiving?"

Jim Hawkins stared savagely at the tall, thick-shouldered Nazi.

"Just two Americans," he said flatly, "who'd sell their chance at Heaven to get their hands on your neck for twenty seconds."

"Such ferocity," the German officer said softly. "We have ways and means to temper such—er—high spirits at our camp."

Jim glanced about the brooding quietness of the valley with sudden suspicion. The brilliant reflections from the crystalline ground sparkled in the murky atmosphere, but there was an unnatural stillness in the air that roused the hackles on the back of his neck.

"Just a fair and even exchange," he murmured, as the small, bent form of the leader, Aton, was transferred to the group of Radion creatures. "Somehow," he said, glancing sharply at the German officers, "it doesn't seem quite in keeping with the Nazi tradition."

"What do you mean?" Oberleutnant Schiller demanded sharply.

"I'm not quite sure," Jim said quietly. He looked in silent pity at the

CHAPTER V

Aton's Sacrifice

small figure of Aton, the leader of these people, and then his gaze swung to Dexlon.

"Watch yourself, chum," he said. "There's something about this deal that stinks."

"*Schweinhund!*" the German officer roared. "Hold your tongue!"

He drew his Luger and levelled it at Jim.

"You come with us," he ordered. "You are going to answer a few questions, and then I think you will be soon meeting your ancestors in Valhalla."

His aide prodded Phil Roberts in the back with his gun and ordered him to march. The two Americans were herded across the flat barren wastes of the valley, in a direction opposite to that the small group of Radion creatures had taken.

Jim looked over his shoulder just as the last of the small group of strange creatures filed out of sight into the single passageway that led from the valley.

He turned and plodded on, but he had not covered a dozen steps when a sudden volley of gunfire broke the silence, ringing clearly in the brooding atmosphere of the valley.

The Oberleutnant smiled thoughtfully.

"Well, well," he murmured, as another burst of fire sounded; "perhaps the little creatures of Radion have run into one of our scouting patrols. A pity, isn't it, that the patrol probably wouldn't know anything about the terms of our little parley?"

"You damn murderer!" Jim blazed. "You had no intention of keeping your word."

"Does that surprise you?" Oberleutnant Schiller said cynically. "You should know us better, *Herr Schweinhund!*"

JIM HAWKINS glared at the mockingly twisted features of the German officer, and he moved instinctively forward, his hands balled into hard fists.

The German raised his gun.

"I wouldn't advise you to make any rash gestures," he murmured.

Jim fought back the rage that was sweeping over him. There was no point, he knew, in committing suicide, and that would be the inevitable result of an attack on the armed German officers.

The echoes of gunfire had faded away and the vast stretching wastes of sparkling crystal were once again quiet and still. He thought bitterly of Dexlon, probably lying dead now, and Aton, the strangely pathetic leader of these enslaved creatures of the radium planet; and he made a grim resolve that if he died unable to send warning to Earth he would at least make an effort to avenge the deaths of these creatures.

Oberleutnant Schiller motioned them onward with his Luger.

"I know you are in a hurry to reach your ultimate destination," he said mockingly.

Jim and Phil Roberts marched ahead of the German officers and their eyes were as bleak as the desolate wastes they traveled. They crossed the wide valley and, at its far end, came to another exit, cunningly camouflaged. This passageway led them through a narrow gulley that broadened into a wide, low valley, in which the German camp had been erected.

Jim's first view of the sprawling German encampment left him with a feeling of stunned helplessness. With

typical Nazi thoroughness the camp was complete in every detail. Barracks were constructed along one side of the settlement, and opposite these were giant hangars and catapult apparatus for launching planes. Radio towers spiralled into the air from one low, squat building, and this structure was guarded by patrolling soldiers.

There were not many German soldiers in evidence, but from the size of the barracks and camp Jim knew that there must be at least several hundred of them on the asteroid.

Schiller smiled gloatingly at the expression that flitted across Jim's lean face.

"You are surprised?" he asked, baring his teeth even wider. "Your stupid comrades on Earth will also be surprised in a few months when we throw the *full* strength of our radium equipment at them. What they've tasted to now is but a preliminary of what's to come. The war will be over in a matter of months, and the foolish Americans will then be made to pay for their resistance to our new order."

THEY had been marching down the wide street that cut between the barracks and hangars, and now Schiller ordered them to halt before a small structure, built completely of metal and circled with heavily insulated wires.

The door of this building was open and Schiller motioned them inside.

"For the time being, these are your quarters," he said. He paused before turning away, and added, as if in amused afterthought, "I can imagine your surprise in being addressed in English by the Radion creatures. They were extremely adept at learning your stupid tongue, as you no doubt noticed. We taught it to many of them as a jest, in our anticipation of the day all English-speaking peoples will be as en-

slaved as they are on this asteroid right now."

It was Phil who snarled an answer to this.

"Your sense of humor is gonna kill you, Boche boy. Mark this American's word on it!"

Schiller's lips went tight in a smirk. He waved the pistol in his hand menacingly.

"Inside, both of you, before my sense of humor prompts me to kill *you*!"

Phil's face was flushed with rage, and his head was cocked beligerently knots of anger. Jim put a hand on his to one side, while his fists were tight shoulder quickly, restrainingly.

"Don't be a damned fool, Phil!" he snapped. "He's holding the tricks in this hand. Come on!"

Jim swung his companion toward the door that was obviously the entrance to quarters which would be their cell. The unpleasant laughter of Schiller sounded harshly behind them.

Jim and Phil stepped into the small cell-room and the door closed behind them. The room was lighted with electricity and there were bunks against the wall and a wash basin in the corner. The windows were heavily barred and wired.

Jim studied the interior of the cell thoughtfully, noticing particularly the heavy steel mesh that lined the walls. Heavy, insulated wires twined through this mesh and a faint crackling of released energy sounded from the places where these conduits made a contact with the steel mesh.

"I'd keep away from the walls," he said to Phil. "They look as if they're wired with some kind of a charge. I'm not sure what it is."

Phil stretched himself out on a cot.

"Well, I'm not going to play guinea pig and find out for you," he promised. He was silent for several sec-

onds, bitterly regarding the ceiling. "It looks as if we traded one cell for another," he muttered.

"I liked our other captors better," Jim said dryly.

"Me, too," Phil said. . . . "I wonder what happened to Dexlon."

"He was probably killed in that ambush, along with Aton. For their sakes I'd like to take a crack at these rats before they rub us out for good."

Phil glanced helplessly about the heavily barred and wired room.

"No chance of cracking out of here," he said. "What do you suppose Schiller meant about the war being over in a matter of months, when they really begin to perfect their radium equipment? Was that just a typical Nazi bluff, or do you think there was something to it?"

"What do you think?" Jim said bitterly. He shrugged helplessly and moved away.

They were silent then for a while, while Jim paced nervously up and down the narrow room. Finally he glanced out the barred window and turned to Phil.

"It seems to be getting darker outside," he said.

THE brightness of the crystalline reflections was fading as the sun set in a dull blaze of glory on the far horizon. Soon its last rays had vanished and darkness, swift and complete, settled over the sparkling planet.

"I wonder how long 'night' lasts here?" Jim said thoughtfully. He frowned and turned to Phil. "Our only chance for a break would be in this darkness. In the daylight we wouldn't have a ghost of a chance."

"Sure, so all we have to do is find a can opener and cut our way through these wired walls," Phil said.

There was a sudden tramp of feet

outside and then the cell door swung open. Two Nazi troopers appeared in the doorway, holding a small, frail figure between them.

"Company for you swine," one of them growled at Jim.

The two soldiers shoved the small figure into the cell, then stepped back and slammed the heavy door.

Jim started in surprise as he recognized the small form, mild features and soft blue eyes of Aton, the leader of the creatures of Radion. The small creature stood in the center of the room, regarding Jim and Phil with a strangely helpless and pitiful expression.

"I am Aton," he said. His voice was soft, but it had the same stilted, precise accent as had Dexlon's.

"We thought you were dead by this time," Jim said. He introduced himself and Phil to the leader of the Radion creatures. "Where is Dexlon and the others who are fighting the Germans?"

"Dexlon was killed in the ambush," Aton said in his soft, sad voice. "I was not killed because I am worth more to them alive. They know that by holding me they can force my people to obey them more readily."

"I tried to talk sense to Dexlon," Jim said bitterly, "but he refused to believe me. I told him that the Nazis would never keep their end of the agreement."

"I knew that, too," Aton said softly, "but there was nothing that I could do." He glanced slowly about the small room. "This has been my home for the last three years. Now it seems I shall be here until I die. I have tried to keep hope alive, but I now see that I have been fooling myself. My people will never be able to throw off the yoke of their oppressors." He regarded Jim steadily and there was deep puzzlement in his eyes. "But why are you imprisoned here with me? Are you not the same as they?"

"Thank God, no!" Jim snapped.

Briefly, he told Aton of the struggle on Earth and how he and Phil had come to the strange planet of radium.

Then he asked, "How many of your people are still free and willing to fight the Germans?"

"Free or enslaved, they are all willing and anxious to fight the Germans," Aton answered with pride in his voice. "But the great majority of them are chained in the mines of the fields and forced to produce the radium the Germans seem to want so badly. Hiding in the hills are possibly a hundred and fifty or two hundred of my people, who have not yet been caught by the German scouting parties. When they hear of Dexlon's death I fear that they will storm this camp in a foolish attempt to liberate me."

JIM began pacing restlessly.

"If there was some way we could get out of here," he said explosively, "we might have a chance. With your people behind us, we could—" He broke off and stared with sudden intent at the mesh sheathing that covered the walls. "What kind of a set-up is this wired inner wall?" he asked Aton. "We assumed the sheathing was charged with electric current. Is that right?"

Aton shook his head. "This cell was designed by the Germans especially for me. You see, we natives of Radion have developed an immunity to radium rays. Our bodies are completely saturated with them and we are able to resist the effects they have on cellular organisms, such as you from Earth possess. So the very clever Schiller devised this energy shield which short-circuits the radium which is absorbed by our bodies. It is not an electrical ray; you would not be affected by it; but to us it is fatal. It severs the double purpose of making me an abso-

lute prisoner, and of making a rescue by my people impossible."

Jim nodded thoughtfully. The information that the power shield which lined the interior of the cell would not affect him or Phil was interesting; but it didn't make their escape any easier, for there were still the barred windows and door to consider.

Aton said, as if reading his thoughts, "The doors and windows are operated by the same source of energy which powers the ray shield in the cell. Unless the entire unit could be short-circuited some way, there is no possibility of opening the door from the inside."

Phil sat up, a sudden interest on his rugged face.

"Well, is there any way of shorting this ray shield?"

Aton shook his head slowly.

"I do not believe there is," he said.

Jim shrugged helplessly and seated himself wearily on the other cot. He didn't mind dying, but he hated the realization that he was unable to strike a blow at the enemy before his final blackout.

"There must be a way," he muttered. "There *must*!"

"How long does this darkness last?" Phil asked Aton.

"Only for a few hours. Light will be breaking in a very little—"

He didn't finish the sentence. His head cocked to one side in a listening attitude.

"What is it?" Jim asked tensely.

From the darkness outside drifted faint, far-away cries and then the silence was shattered by a rapid burst of pistol fire.

"It is an attack by my people," Aton cried. "Oh, the poor blind fools!"

Jim sprang to his feet, his pulses pounding with excitement. The sound of the conflict was drifting closer.

Harsh guttural voices were shouting orders; gunfire sounded in rattling, sporadic bursts; and these furious salvos were answered by single shots.

ATON stood in the center of the room, an expression of anguish distorting his seamed face. His deep, calm eyes were clouded with an inexpressible misery.

"Oh, the fools," he moaned. "Their loyalty will cost them their lives."

Jim paced nervously up and down the room.

"We've got to get out and help them," he spoke through tight, hard jaws.

Phil said bitterly, "There's no chance. We're caught here like rats—"

"Listen!" Aton said sharply. "There is a way for you two to make an escape. At least you can get out of this cell."

"How?" demanded Jim.

Aton regarded them for an instant and a faint smile touched his lips. He backed slowly toward the wall.

"I didn't think of this a moment ago," he murmured. "The only thing that will short this power shield is a radium conductor like—myself."

"What do you mean?" Phil cried.

Aton took another step backward. He was only inches from the charged metal sheathing.

"It is the only thing I can do," he said softly. "My people are sacrificing their lives against the enemy; I cannot do less. My death is nothing. Strike hard, soldiers of America, for Aton and for free men everywhere."

His smile faded and a resolute line hardened his jaw. He stepped backward another step and his small, frail body touched the metal sheathing.

A sputtering, cracking sound roared through the room. The metal guard

glowed a vivid, cherry red and blinding flashes of energized light forked out from its gleaming surface.

Aton's body stiffened convulsively as the blasting power coursed through him with shattering force. For an instant he was impaled on the glowing screen and then, with a convulsive twitch, his charred, lifeless form fell forward to the floor.

The raging red glow of the screen faded; the leaping lights disappeared and the electric illumination of the cell seemed lifeless and pale.

Jim Hawkins stared in shocked horror at Aton's crumpled form. He was so dazed that he didn't notice the door of the cell swinging slowly open.

Phil clutched his arm.

"Look," he said tensely. "The door! We've got our chance."

Jim was still staring hard-eyed at Aton's body.

"We're going to take that chance," he said. And added harshly, "For you Aton, and the millions of poor devils like you on Earth!"

WITH Phil at his side he headed for the door. The darkness that cloaked the small planet of Radion was complete, and as they stepped from the cell they were instantly swallowed in its stygian, engulfing blackness.

From the sporadic sounds of the fighting Jim knew that the unequal battle was raging in the main avenue of the camp, about two hundred yards from where they stood.

"We need weapons," he snapped to Phil. "We'll try to make our way to the German ammunition storeroom. I spotted it when we arrived. It's on the other side of the barracks."

They wheeled and started down the dark street, but before they had taken a dozen steps, Jim jerked Phil to a stop. Directly before them, vaguely

discernible in the darkness, were two German sentries, babbling at each other excitedly, uncertainly.

The sound of the firing had covered the approach of the two American flyers.

"Come on," Jim whispered savagely.

He rose from his crouch and hurled himself at the first sentry. His forearm closed over the man's neck like a bar of steel. There was a hoarse bleat of fear from the man before Jim's powerful arm cut across his windpipe, silencing him.

His knee dug into the German's back. With his forearm locked under the man's chin, he leaned back sharply, straining with all the whipcord strength of his powerful body.

There was a sharp, cracking snap that was like the breaking of a rotten limb; and the German's body was suddenly limp in his arms.

He hurled the man aside and wheeled about; but Phil was already climbing from the still form of the second sentry.

"One, two; just like that," Phil said.

"Get his gun," Jim snapped. "We're just starting."

He retrieved the gun from the man lying at his feet. The feel of its heavy bulk in his hand was comforting. His fingers closed over the butt with savage anticipation.

"Let's go!" he said.

They ran now, side by side, along the darkened street, toward the sound of the fighting. When they passed the looming bulk of the barracks, Jim grabbed Phil's arm and pulled him to a stop.

They turned at the corner of the barracks and crouched in the darkness, pressed flat against the wall of the building. Ahead of them was the ammunition storeroom, a darker shadow against the blackness of the night.

The door was open and an oblong of

light fell from the doorway against the night. There were two sentries guarding the door, but both of them were standing with their backs to the Americans, staring in the direction of the street fighting.

Jim and Phil moved toward them cautiously; but within six feet of the sentries, Phil's foot scraped against a discarded metal container, and the sound seemed loud as an artillery barrage in the comparative stillness.

Both sentries wheeled toward the sound.

"Who goes?" one cried in guttural German.

The second wasted no time in conversation. His gun coughed and a livid orange streak blasted from the muzzle.

JIM felt the bullet fan past his cheek. He threw himself to the ground as the second sentry opened fire. He heard Phil smother a cry of pain as the two Germans blasted a quick round of shots at them.

He raised the gun he had taken from the sentry and fired deliberately and methodically at the two Germans. They were both outlined against the light streaming from the munitions storeroom; and at six feet he couldn't miss.

He didn't. One of the sentries fell forward, cursing chokingly; the other slumped backward against the storeroom, a neat, blue hole drilled cleanly between his eyes.

Jim crawled quickly to Phil's side.

"Where'd they get you?"

"It's all right," Phil said, through set lips. "Just my left arm. Let's go."

They covered the remaining distance to the lighted door in a plunging dash. The interior of the large storeroom was deserted. Jim's eyes ranged quickly over the stocked bins and shelves until he sighted the round, gleaming, masher-

headed grenades.

"That's what we want," he said grimly.

The two Americans were moving toward the bin of grenades when a voice behind them said quietly,

"Please turn around!"

Jim froze at the words. For an instant he debated wheeling and firing, but he turned slowly and helplessly toward the sound of the voice.

One of the strange creatures of Radion stood in the doorway, a gun in his hand. And behind him were others.

Jim felt a surge of hope.

"Don't shoot," he cried. "We're fighting with you."

The face of the creature of the radium planet was blankly impassive. Its still eyes studied the two Americans without expression. For an instant there was a dead silence in the room; and then the gun in the small hand lowered.

"We know of you," the creature said.

"We will fight together."

Jim grinned exultantly. "You bet we will."

"We need guns and explosives," the small creature said. "We slipped through the German lines to reach here. Our comrades are waiting for us to return."

"How many of you are fighting?" Jim demanded.

"Every man of Radion has joined the revolt," the creature answered. "We will die as free men rather than live as slaves. The laborers in the mines and the free fighters of the hills have joined; and we shall never stop until we are free—or dead."

"We must work fast," Jim said crisply. "Take what supplies you need, but post guards here to hold this storeroom. Some of you attack the German rear with grenades; the rest get back to your comrades with the munitions

they need. My friend and I will strike at the radio center. We must stop them from radioing to Earth for assistance."

"There are two radio towers," the creature answered. "One is here in camp. The other is several miles from here in the direction of due west."

"We'll have to take care of them both," Jim snapped. "But the one here in camp is first on the schedule." He grabbed up a sack of grenades as the small group of Radion creatures streamed into the room and moved swiftly toward the stocked bins of munitions and explosives.

"Come on," Jim snapped to Phil, "we've got our work cut out for us. If we can get word to Earth, possibly we can get reinforcements. But we've got to stop the Germans from doing that themselves."

THEY left the munitions storeroom on the run, cutting diagonally across the street toward the German radio station. There were no soldiers in that section of the street and the low, squat radio room was unguarded by sentries. Obviously the surprise attack of the Radion creatures in force had drawn all of the Germans away.

But the door of the radio room was closed tightly and locked. There was no time to waste, every precious second counted now.

Jim stepped back a pace and fired three shots into the lock. Then he raised his booted foot and kicked the door open.

A shot whizzed past his head as he charged into the room.

The radio operator was on his feet, a flaming gun in his hand. Jim took a bullet in his shoulder that slammed him halfway about. On one knee he whipped up his gun and fired twice at the operator.

The first bullet missed; but the second caught the German just below the heart. He staggered back, his face tightening with pain.

"Dog!" he sobbed, grinding the word between his teeth.

He raised his arm with painful slowness. His breath was catching raggedly in his throat and blood was flecking his slack lips. But he did not fire at the Americans.

With a horrible smile of triumph, he turned and fired four deliberate shots into the gleaming radio panel, shattering it completely. Still smiling, he slumped forward to the floor.

Jim closed the door of the room and locked it. His shoulder was on fire; but he forgot his injury as he stared helplessly at the shattered radio equipment.

"He won," he said bitterly.

Phil moved slowly toward the smashed transmitter. His left arm hung limply at his side and blood dripped from his fingertips.

"Little chance of fixing it," he said. He reached out a hand to steady himself. His face was a tight, white mask of pain. "We're licked."

"Like hell we are," Jim said harshly. "There's another transmitter on this planet, isn't there?"

"That's right," Phil said. He looked at Jim speculatively. "You're wounded," he said. "You wouldn't have a chance of making it." His grin was weak. "This is a job for me."

Jim shook his head slowly.

"Not this time, tough guy," he said softly. "You hold down the fort here."

"But Jim—"

"It's an order," Jim said softly. "I'm in better shape than you are, fella."

He gripped Phil's good arm tightly for an instant.

"If—anything happens," he grinned fleetingly, "keep 'em flyin'."

He turned then and opened the door. With his gun held tightly in his unimpaired hand, he faded into the darkness of Radion's night.

CHAPTER VI

Fight to the Finish

FOR fully a minute, Phil Roberts stared at the door that had closed behind his buddy. Then, a curious expression coming into his eyes, the radio-man shifted his gaze to the ruins of the Nazi short-wave apparatus.

His jaw tightened grimly as he stepped across the body of the dead German operator. Then, painfully, he was bending over the shattered wreckage of the radio, turning the fragments appraisingly with his uninjured arm.

For another five minutes, squatting first on one side, then another, of the damaged equipment, Phil Roberts continued his appraisal of the wreckage.

"It should be hopeless," he muttered sickly to himself. And then a hard gleam frosted his eyes and his jaw went even tighter. "But by Judas Priest—it has to be licked!"

He rose then, unsteadily. His face was white, his eyes growing glazed.

Quickly, violently, Phil shook his head to clear the gray mists that were wrapping insidiously around his mind. He thrust his right hand forward swiftly to save himself from falling.

The edge of the radio table was blurred before his eyes. His hand couldn't reach it, couldn't quite locate it. The gray mists were around him.

Phil Roberts crashed face forward to the floor and lay there inertly. Consciousness had fled. The loss of blood had been too much. . . .

IN the shadows of the barracks to the west of the Nazi encampment,

Jim Hawkins moved swiftly along at a half trot. Ahead of him, silhouetted perhaps a hundred yards away in the darkness, loomed the hangars and space craft catapults of the Nazis.

To the east the sounds of the delaying battle of the Radion infiltration patrols still crackled through the night. The brief, changing, sporadic fire, Jim knew, came from the little bands of Radion creatures; the heavy fire of tommy guns and automatic rifle squads, came from the surprised Nazi garrison.

As Jim drew closer to the hangars and catapults, his jaw tightened. What he was about to do might well amount to a suicidal burning of all bridges behind himself and Phil—but it had to be accomplished.

He slowed his trot to a walk now, crouching lower in the shadows of the barracks buildings. The first hangars and catapults were less than twenty yards away; the remainder not more than forty yards distant.

There would be sentries out there, sticking by their posts on orders in spite of the attack of the Radion creatures. But their presence had to be risked. He was alone, with small chance of dispatching them one by one.

Now Jim was at the corner of the last barracks building, and he bent even lower in a crouch that resembled the racing start of a century dash man in a track meet.

He filled his lungs with air, steeled himself in one last instant, and sprang forth from the shadows of the building, heading straight for the first group of hangars and catapults.

His dash was straight into the open sections before the hangars, and he buried his head against his chest, driving hard to cover the distance with all the speed at his command.

"Halt!" The alarmed cry, shouted in German, rang forth in the darkness,

to be immediately followed by four similar cries along the hangar lines.

But Jim didn't halt. Instead he was fishing into the grenade bag slung from his shoulder, pulling forth a Nazi masher-type hand grenade and jerking the pin from it with his teeth.

A shot blasted through the darkness—an orange flame spitting from directly before the first hangar line.

Jim dropped to one knee, counting as he did so. Then he let fly with the masher grenade, hurling it with all his strength in the direction of the first hangar line.

He dropped flat to his face, scant seconds before a jarring explosion rocked the grounds and the hangar line burst into a crimson ball of smoke and flame.

But Jim didn't pause. He was back on one knee, now, scrambling to one side a bit to throw the sentry fire off range again, pulling another masher grenade from the sack and jerking the pin free with his teeth.

Again Jim hurled a masher grenade through the darkness, this time toward the second hangar line. And again, as he threw himself flat on the ground, another section of hangars and catapults went up in the resultant explosion.

Now he was on his feet, dashing forward. The grounds were eerily, waveringly illuminated now by the fires the grenades had started. The cries of the sentries were wild with near hysteria, and their rifles blazed forth blindly in an effort to bring down the unseen creator of this devastation.

ANOTHER line of catapults and hangars, and two more grenades hurled unerringly at them, while Jim Hawkins' lips flattened savagely against his teeth in a mirthless grin of satisfaction. For in those hangars, and in many of the catapults, were the now

smoldering wrecks of what had once been Nazi space flight ships. Ships that would not be used in any Nazi dash to the *Vaterland* for assistance.

Three more hangar lines, and three more explosions splitting the darkness with noise and flame and smoke. Jim hesitated only a moment as he looked across the grounds at the chaos he'd created single-handed. There wasn't a ship left on this asteroid, to his knowledge, in which the Nazi swine could make a run for assistance from their Earth forces.

It was dog eat dog, now. No one was leaving this asteroid—including himself and Phil.

"Now," Jim said tightly, "for that other radio transmitter outfit!"

It was necessary for Jim to make his way around the outskirts of the German encampment until he was clear of the immediate zone of hostilities between Nazi squads and Radion patrols. Mentally, Jim thanked his Maker that the Nazis were still treating the Radion attack as a foolhardy skirmish on the part of the natives. But he knew that this would not be the case much longer. Even now the word was probably being carried to Schiller's quarters that the space flight hangars and catapults had been decimated.

"The moment the Nazi, Schiller, realizes that," Jim told himself, "this fracas is going to be all out for sure!"

For an instant Jim thought of Phil back in the first radio transmission shack. That arm wound had been far worse than his own. But yet, Phil seemed able to carry on. He had weapons, and he'd know enough to clear out of there before Hun soldiers stormed into the place. Jim pushed that worry from his mind and hurried onward.

It was difficult establishing his location and the probable location of the

other transmission shack map-like in his mind. But with the factors Jim already knew about the terrain of the little asteroid, plus a strong sense of reckoning found only in born pilots and navigators, Jim was able to continue in what he felt certain to be the approximate direction of the transmission shack without too much delay and hesitation.

He was scarcely five minutes beyond the Nazi encampment when the sound of exploding grenades joined the incessant gunfire of the many skirmishes around the camp. Mentally, Jim prayed that the grenades he heard exploding were those of the Radion creatures—seized from the munitions supply house—rather than the Nazi defenders.

IT WAS later, a brief three minutes later, that Jim heard the sound of gunfire dead ahead of him and perhaps half a mile off. He frowned worriedly. Gunfire, dead ahead. There couldn't be! The only gunfire he should be hearing should be behind him, around the Nazi encampment he'd left.

Cold fear seized Jim's heart. Had he doubled in his tracks unconsciously? Was he somehow confused, lost in the none too familiar terrain of the asteroid? Had he become so badly mixed in his calculations as to now be approaching the German encampment again?

For just an instant, Jim hesitated. Then, setting his lips tightly, he resumed his trot toward the sound of that gunfire. Jim had come to count on his directional reflexes far too long to allow himself to lose confidence for more than an instant. He had to be right. That had to be the transmission shack up ahead. And as for the gunfire, which sounded as if it came from that location—Jim could only guess.

Lungs burning, legs weary and almost lifeless, Jim forced himself into greater speed as he hurried toward the gunfire ahead. And with the passing of the first minute, as he sought for any sort of landmarks in the darkness

of the crystalline asteroid wastes, Jim felt more and more certain that he was right. The transmission shack of the Nazis had to be ahead up there.

Already Jim was reorganizing plans he'd conceived to meet any possibili-

Jim leaped on the Nazi, gripped his throat and hurled him back



ties. It had been his intention to take the shack by strategic maneuver, so that he wouldn't run the risk of having the operator destroy the transmission apparatus as the first one had done. Then, his course of action was clear cut. He had to radio Earth. Had to get word to the United Nations forces, and to Colonel Mollison in particular—before additional Nazi forces arrived on Radion, or before the radio silence from Radion was interpreted by the Nazis to mean trouble. Jim had a hunch that this so-called native skirmish against the German garrison would not be reported by Schiller to his superiors on Earth. Not, at least, until it gained proportions of serious trouble.

That was a chance he was counting heavily on. That, and the chance that Colonel Mollison and Baldwin could make that swift, one-hour conversion job on enough strata interceptor ships—turning them into crude equivalents of the X-80—to dispatch to Radion as swiftly as possible.

The terrain was sloping upward, now, into what seemed to be a high knoll of crystalline asteroid crust. The sound of firing ahead was much louder, and Jim knew that just beyond the peak of this knoll would be the transmission shack.

Slipping, sliding, falling twice, Jim scrambled up the sloping surface of the knoll, the din of gunfire now less than a hundred yards away. Almost at the top of the knoll, Jim dropped to his stomach. Now he began a painful snake-wiggle along the jagged asteroid crust toward the peak.

Half a minute, then a minute, and Jim was on the peak of the knoll, looking down into a small valley, in the center of which he saw the transmission shack. Orange spurts of flame flashed sporadically from the windows of the shack into the darkness around it. And

from the other three approaches to it, answering flashes of gunfire streaked the darkness.

A patrol of Radion creatures had surrounded the transmission shack, had the Nazi operator—or operators—cornered inside, and were now determinedly taking their time in cutting them down!

INWARDLY, Jim cursed. The well-meaning natives had almost completely destroyed his chance to gain the transmission shack. There was obviously no longer an opportunity to carry out the strategic maneuver he'd planned for its capture. And in addition to that, the time that would be wasted before the Radion creatures were able to cut down the Nazis in the shack was infinitely vital in Jim's calculations.

Sickly, Jim watched the siege display, fully aware of what each passing second was costing his chances of success. There had to be some salvation to his plans. He had to gain that transmission shack quickly and at all costs. But how?

Minutes passed, precious minutes, while Jim desperately hit upon and discarded at least a dozen revisions in his plans. There didn't seem to be anything that would end that long siege unless—unless, Jim frowned, he could get to the leader of this Radion band and persuade him to call off the siege.

Jim started to scramble down the knoll with this in mind, when a deafening explosion shattered the night.

The transmission shack—a bursting geyser of flame and smoke—blown sky-high by a well-placed grenade from one of the Radion besiegers!

Cold horror gripped Jim's heart in crushing fingers. He stared unbelievably at the blazing ruins of the transmission shack. One of the Radion besiegers, impatient with the progress of

their attack, had taken a swift, sure method of eliminating the hated oppressors.

But with that grenade's explosion had also been blown sky-high every last chance of success that Jim had hoped for. With the destruction of the shack by the unwitting besiegers, went the last fragment of Jim's chance to send to Earth for aid. That grenade had destroyed the last fighting chance for the free peoples of a planet miles away in space. With its explosion went every hope of the United Nations ever learning the secret of the Axis radium sources which would enslave Earth!

Jim buried his head in his hands, heedless of the stabbing agony that lanced his wounded arm. It was over, all over. He was licked, clean through. Licked, ironically enough, by the unwitting action of the oppressed people he'd hoped to save.

What now lay in store for them was horribly clear. With both transmission shacks destroyed, the Nazi receiving stations on Earth would become alarmed at the sudden cessation of contact with their radium asteroid. That alarm would result in a swift dispatch of Nazi space flight ships and troops to Radion. And those troops and ships would regain control of their invaluable asteroid with incredible ease.

It was all over. Through, finished. He was beaten.

Suddenly Jim rose, his fists clenching and unclenching at his side, the hot, searing pain in his wounded arm driving furious needles of protest into his agonized mind.

And it was then that the wild, red, engulfing wave of rage swept over him. A rage born of pain, bitter anguish, stark despair.

"Damn them!" Jim snarled. "There won't be one of them alive to greet their rescuers when they come!"

He started down the treacherous slope of the knoll at a heedless, break-neck run. Down there around the wreckage of the transmission shack were enough creatures of Radion to form the first small fragment of a hell-defying band.

Jim shouted as he stumbled down the slope. Shouted wildly, with every remaining gasp of breath in his lungs—shouted a savage rallying cry of hate.

THE Radion creatures, several dozens of them, swarmed around him as he reached the level of the valley. Their faces in the darkness, touched only by the crackling fire that was once the radio transmission shack, were wide with wonder at the blazing words from the wounded young Earth creature who commanded them to follow him. There was no hesitation among them as they swarmed behind him back up the ragged surface of the knoll. For he was leading them to the encampment of their oppressors, and they needed no more urging to follow the strange, mad-eyed young self-appointed leader.

Scattered groups of Radion guerillas joined them along the route, and now their band numbered more than eighty. The young American was still at their fore.

And half a mile from the Nazi encampment, he turned and shouted to his followers.

"We'll die. We're bound to die. But by whatever Gods you worship, I swear that not one of those dogs will live when we are done!"

The hoarse, blood-lusting roar that was answer to these words sprang fiercely from every throat. They swept on once more, until, a quarter mile from the Nazi garrisons, they met the ragged, retreating remnants of the first attackers.

"Our parties are still inside the camp," the leader of these retreating Radion creatures gasped. "How many of them, I do not know. But they are cut off from aid, and are being slain like animals!"

"You are afraid to die?" Jim blazed at the speaker.

The other's eyes flashed. "Never!" he said.

"Then turn back. Join us. Fill our ranks, for we're going into that camp. We're going to fight until we die or they die!"

Over a hundred of them followed Jim, now. A wave of more than a hundred howling, fanatical madmen who cared not at the thought of death. Men sworn to kill and die killing.

The small Nazi patrol which had set out to follow the fleeing remainder of the original attackers encountered this wave. They fought but briefly before the wave rushed over them, leaving nothing but bodies of the Nazi swine in their wake.

Their entry into the camp—a group of fanatically inspired demons swarming back from what should have been their retreat—took the Nazi defenders utterly by surprise.

Twenty-five creatures of Radion gave their lives to smash through the first defense line of the camp. And twice that number of Nazis were left lifeless as the unarmed members of Jim's horde tore from their dead fingers the weapons which had failed to save the German troopers.

The wave swept on, shrieking, howling, cursing above the din of battle and the chatter of leaden death.

At the center of the camp, Jim sent them off into two groups to cover either flank, while with a squad of ten he led a headlong rush on the central barracks.

It was Jim who picked the tommy gun from the death grasp of a slain

Nazi trooper. It was Jim who smashed in the door of the strongest redoubt at the corner of the central barracks.

He blazed leaden death at the occupants of that redoubt as he rushed into the room, and had the deep satisfaction of seeing the pain twisted features of the Nazi Schiller freeze into a grimace of death as he sprawled to the floor with a dozen bullets from the tommy gun in his chest.

IT WAS later, almost half an hour later, that they relieved the besieged camp radio transmission shack. The occupants of that shack, creatures of Radion, had been gallantly standing off a Nazi machine gun cross-fire. The Boche gunners, taken by surprise in an assault from behind them, had scarcely time to cry out.

And it was then, as Jim stumbled into that shack, that he stopped strickenly, open-mouthed, numbed with amazement and a sudden impossible hope.

For Phil Roberts was there. A white-faced, fever-eyed, delirious Phil Roberts who sat before the radio transmitter flashing an endlessly repeated message out into space.

He looked up at Jim Hawkins, grinned grotesquely, and through thick lips mumbled one sentence before he pitched from his chair to the floor.

"You sure as hell took your time!"

Unbelievably, Jim stared at the weird, absolutely incredible hodge-podge of twisted materials with which Phil Roberts had somehow repaired that radio transmitter.

Then he leaped into action, barking a command to two of the Radion creatures, ordering them to take care of Phil, as he slipped into the chair from which his buddy had fallen.

The transmitter was alive, juiced, sparking. And over the receiving apparatus there flashed an incessant

message which failed at first to register on Jim Hawkins' stunned consciousness.

"Hang on," the message begged. "Help will come. Hang on. Help will come. Instructions clear. Hang on. Colonel Mollison."

Jim's hand went to the transmitter key. He grinned madly and began to flash an answer to those wonderful, wonderful words.

"Having . . . a . . . hell . . . of . . . a . . . fine . . . time," Jim flashed in code. "Wish . . . you . . . were . . . here. Signed: Hawkins."

JIM HAWKINS, one arm suspended in a white medical sling, clean shaven, dressed in his best uniform, tiptoed grinningly up to the hospital bed in which Phil Roberts lay white faced and slumbering.

For an instant, standing over his buddy, Jim's grin grew broader. Then he turned to the nurse, an attractive brunette.

"The big bum doesn't look so bad, considering everything."

"He's doing fine," the nurse whispered in answer. "Rest is all he needs."

"Great guy," Jim whispered. "But don't ever tell him I said so."

The nurse smiled, a very enchanting smile, and nodded.

"Ah, incidentally," Jim said, forgetting to whisper, "haven't I seen you somewhere before, Miss, ah—"

The lovely brunette nurse smiled even more sweetly.

"I really don't believe so, Lieutenant."

"Well, we'll certainly have to do something about that," Jim declared.

A sudden voice made both of them turn to the bed. Phil Roberts, eyes wide open, had lifted himself up on one elbow and was glaring at Hawkins. A very baleful glare it was.

"Listen, you big baboon," Phil grunted. "You get those smart ideas outta your head. I have a date with Miss Selwin the minute they let me outta here—see? I have a date. Not you."

Jim Hawkins grinned from ear to ear.

"Well, well, chum," he said happily. "I think you'll live after all." He turned to the nurse. "Don't you, Miss Selwin?"

Nurse Selwin smiled at the two of them.

"I think he will," she agreed. "If only to spite you, Lieutenant."

THE END

COFFEE PLASTICS

By JAMES NELSON

SCIENCE has probably contributed as much as any other factor in cementing good will for the United States in Brazil, our leading South American Ally in this war—and most of the credit belongs to Herbert Spencer Polin as you shall soon see.

Brazil, as you know, is the world's largest producer of coffee, which is responsible for a good share of Brazil's income. When coffee does not sell, Brazil faces a depression. Moreover, coffee

can be stored for years without spoiling which tends to build up a huge surplus. In addition, many countries were starting to grow more coffee which soon exceeded their own needs and so they started to compete with Brazil's coffee in the world market. To combat all of these factors tending to lower the price of coffee, the Brazilian government started a campaign to reduce the coffee supply to keep up prices.

First, the government bought up the surplus,

but when this became so great they were forced to destroy it. They dumped it in the ocean and treated it with chemicals to spoil it. They even discovered a method of mixing it with tar and pressing it into lumps for fuel. But try as they may, the government was still faced with a coffee surplus. When the outlook was the darkest, Brazil found a life-saver in Mr. Polin who seemed to have the answer to all her prayers.

Mr. Polin was an ingenious inventor and had an insatiable curiosity. His first interest in coffee was aroused when he was employed in 1936 by the Atlantic and Pacific Tea Company to experiment with ways to improve the roasting of coffee. Two years later he began to hear stories of how millions of bags of coffee were being destroyed annually because of the glut on the market. This set him to thinking, then to wondering, and finally to action. He was determined to find a way to utilize this appalling waste. He first decomposed some coffee beans chemically and discovered that they contained all of the chemical parts of plastics. He then started to find a way to recombine these chemicals of coffee to produce a plastic. Success did not come at once, but after much experimentation he discovered the method he was seeking.

The first step was to grind the green beans and to remove part of the oil as well as all of the soluble alkaloids by means of solvents. The residue was mixed with water, certain parts of the distilled oil, and a catalyst and cooked under high pressure. Then he washed away the catalyst and any other soluble material to obtain a plastic powder. This was dyed and molded again under pressure at 325 to 375 degrees Fahrenheit to produce the plastic Polin named Cafelite.

Polin also discovered that the coffee bean would furnish the dyes needed to color the plastics. Further wonders of the coffee bean were uncovered when Polin found he could make both types of plastics known to science; the thermoplastic resins which could be melted and molded over and over and the thermosetting plastic which can only be molded once. The plastic produced could be made opaque or transparent and rubbery or hard.

News of his discoveries reached Brazil, who was in the depths of despair, and President Vargas sent a delegation led by Dr. Paulo Carneiro, head of the Technological Institute of Brazil, to New York to see if Polin's acclaimed results were true. As proof for the delegation, Polin took 123

pounds of coffee and produced almost a hundred pounds of plastic, a pound of caffeine, two gallons of oil, small amounts of cellulose, furfural, and vitamins D and E. The amazed delegation immediately extended an invitation to come to Brazil to start commercial production. Polin has leased his patents for fifteen years to the government of Brazil and he will also serve as technical adviser at the government owned and operated plants.

The first plant was completed in 1941 at São Paulo and its annual capacity is 50,000 bags of coffee to produce 4,250,000 pounds of cafelite. The cafelite can be sold as low as seven cents a pound which should enable it to find a wide market in the United States. Moreover, cafelite is the only plastic in the low price field that can be made without any chlorine derivatives and since chlorine is needed for war needs, the demand for cafelite will be increased.

First results even exceeded expectations and soon the government was making plans with a Pennsylvania concern for machinery to equip a proposed \$3,500,000 main plant which could handle 5,000,000 bags of coffee to produce 350,000,000 pounds of plastic each year. This is about one-half of the present world consumption of plastics, but the consumption is increasing each year at a fast rate as many new uses for plastics are being discovered. The only thing that may hamper this plastic boom is the fact that the chemical solvent essential for production must come from the United States and war time needs might tie up shipping facilities.

In addition to the production of plastics, the proposed plant will be capable of producing 5,000,000 pounds of caffeine which will find many world markets. The coffee oils will be used to make soaps, paints, lacquers, polishes, food products, medicines, bug poisons, and vitamins. The oil can also be used as a substitute for palm oil, which is now so hard to get, in the tin-plate industry.

Polin and his assistants are experimenting with the use of plastics as building material to cope with the shortage of fit homes for the people of South and Central America. But even if no other products or uses are discovered for the coffee-bean, the people of Brazil will never forget Herbert Polin, who discovered the way to turn a \$50,000,000 waste each year into a sizeable profit and probably saved Brazil from economic chaos.

"ENIGMA OF THE CITY"

By Chester S. Geler

Just one more of the many brilliant stories in

AMAZING STORIES' GIANT WAR ISSUE

On sale February 9 at your newsstand

Bill Caldron Goes to the Future

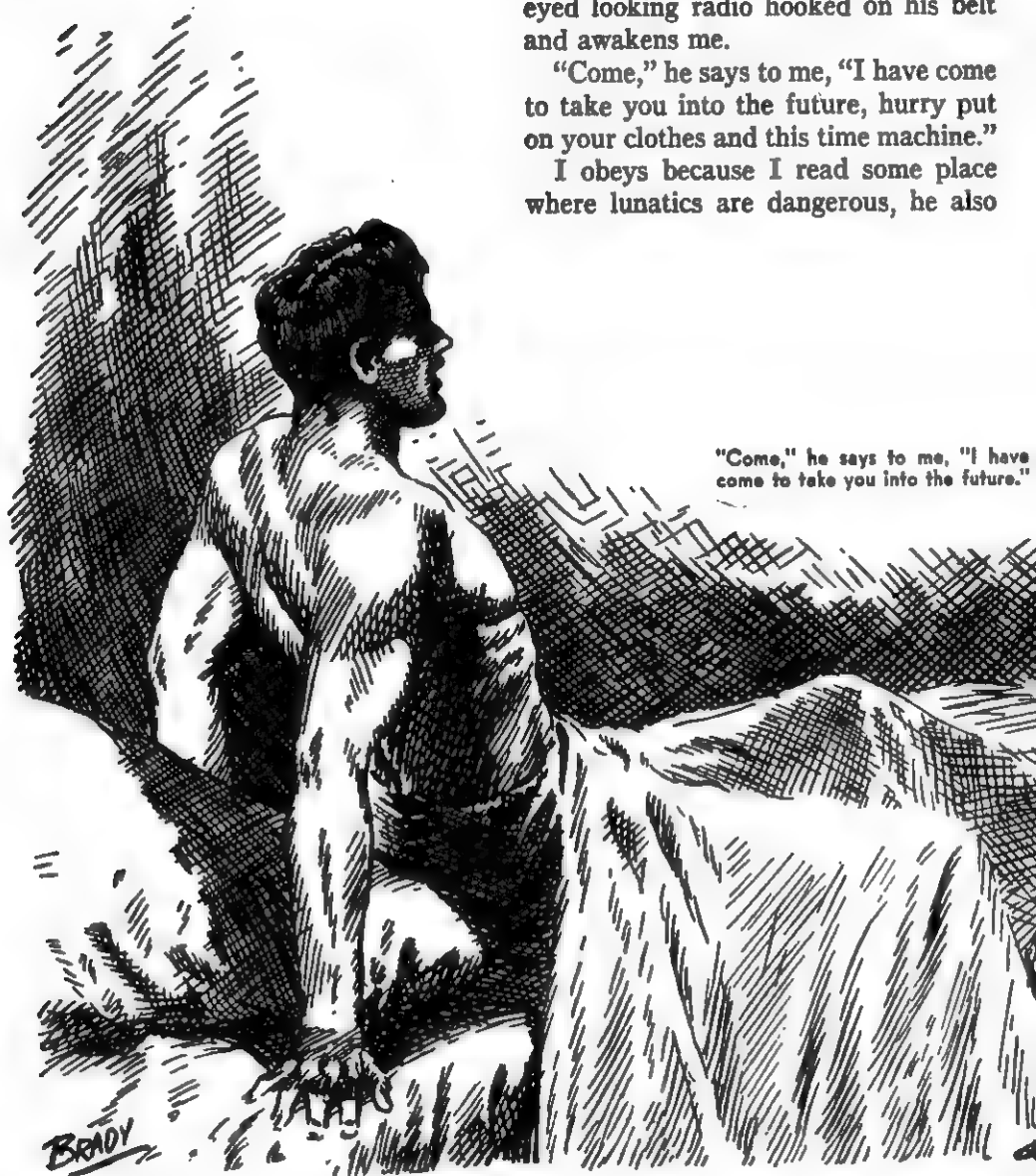
by PAUL MILES

I WAS a normal young man until one night while I was sleeping and dreaming of a good time when in comes this mug with a cock-eyed looking radio hooked on his belt and awakens me.

"Come," he says to me, "I have come to take you into the future, hurry put on your clothes and this time machine."

I obeys because I read some place where lunatics are dangerous, he also

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Bill Caldron was awakened in the middle of the night by a stranger who said he had come to take him on a trip into Time

had a funny gun in a hip-holster.

Getting on the so-called time machine he clicks a button on the thing and everything begins to blur, slow at first then faster and faster until everything turns gray in color. The time machine suddenly stops leaving me a little dizzy, but I soon straighten out when I see what I sees.

Giant sky-scrapers, streets high above the ground, funny looking ships



Bill Caldron Goes to the Future

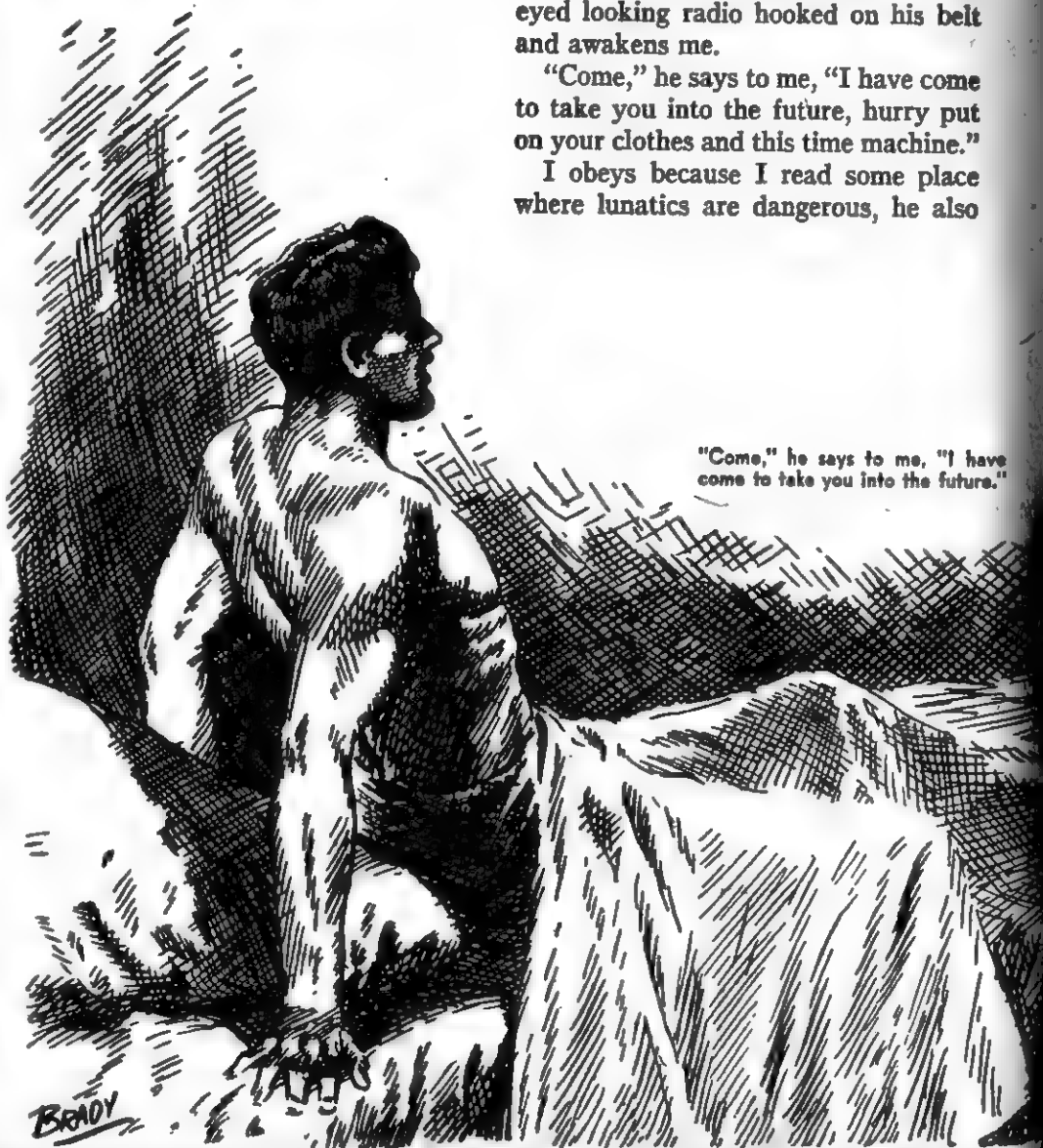
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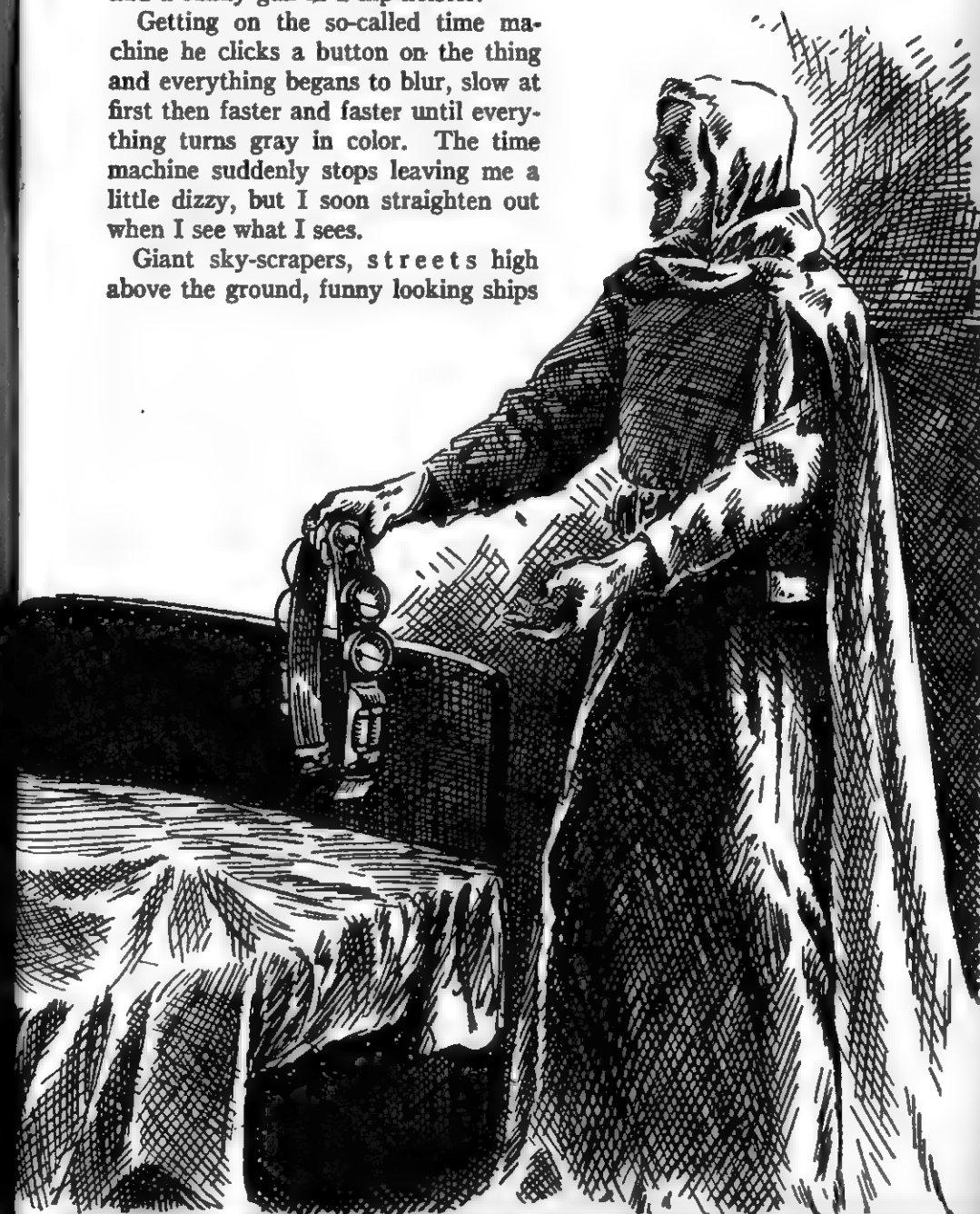


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with fire pouring out the end floating in the air. Then a cockeyed car stops in front of us, and we get in. My partner pardons himself by saying, "Maybe I better explain my sudden appearance by saying I'm Jack Caldron."

"Wait a minute, wait a minute," I growls, "I didn't have any brothers or uncles by the name of Caldron."

"I know, I'm not any of them but your great-great-grandson."

"I know you're nuts now I'm not even married nor have I a girl-friend," I bellows.

"Nevertheless I'm your great-great-grandson, your future wife is Mary Baxner," he grins.

"Come on, what's the gag?" I asks.

"Gag? Am I gagging you?" he enquires.

I almost choked on that and quietly tries to explain to him, "No, no, I mean what's the joke?"

"This isn't any joke, I brought you into the future for a definite reason," he informs me.

"I brought you here to study the wonders of my time; now take for instance that rocket ship up there goes over a thousand miles a second in space, compare it with the dangerous planes of your time 500 M.P.H.—even this rocket car goes faster than the plane of your time!"

"Hold on mister, I wouldn't insult my time unless you want your kisser mashed in!" I warned him.

Just then we arrived at our destination. Getting out of the car we went inside, here I saw at least fifty men in white robes. One spoke to my partner, "I see you have brought us an excellent specimen of the past."

They asked me a lot of questions and then put me in a machine. I feels as if I am being taken apart. This was all I can stand, I explodes, "Say, who in blankity blank do you think I am? I don't like being put on exhibition."

Blowing off my steam I takes out my pipe and began smoking. The white robes gapes at me, and one ran for a pail of water and throws it on my head.

Then he says proudly, "I saved your life, sir, you ought to be thankful for my quick thinking."

"Thankful!" I roars. "What's the idea of throwing the bucket of water on me and ruining my pipe? It cost me five bucks and you throw water in it. Then I should be thankful to you!"

"But you were on fire," protested the man.

"On fire," I was almost too weak to speak. "Say don't you guys smoke? Smoking don't hurt me. Now if you'll let me alone I'll light my pipe again."

EVERYTHING goes along fine until I got thirsty and said, "Would you guys be kind enough to give me a small shot?"

My friends looks surprised and asks, "Won't it hurt you?"

"What a small shot? No I'm use to it," I answers.

Jack took his gun out and fires it at me. I feels like I had grabbed a live-wire and got jolted by electricity. After I got over my shock I bellows out, "What's the idea using that Buck Roger gun at me? I asked you for a shot of whisky!"

"Oh, we thought you meant you wanted a light shock of electricity. We don't drink anything but fruit juices, water, and milk," replies the astonished Jack.

Later I takes out my plug-tobacco; cutting a piece for myself I gives Jack a piece. He started chewing then swallowing it, he said:

"What rotten tasting medicine, I suppose it's stomach medicine?"

"Hey, why did you swallow that tobacco? Are you going to be sick!" I yells spitting a stream of tobacco out the window and hitting a rocket car.

Jack was very sick for a few minutes throwing his breakfast all over the joint. While Jack was doing this I had to spit again, so I spit out the door hitting the rocket cabbie's face (the same one who's cab I got). This only angered him so that he called the police. Everything happened so fast I didn't remember anything until I found myself in the bastille.

I was mad; I began spitting at everything until I hit a tough in the next cell.

"Hey, buddy what's the idea of spitting at me?" he calls.

"Sorry," I said spitting out the cell door. This amazed the tough, but he soon tired of watching me.

After a while I began feeling downhearted when I suddenly felt the key in my pocket. I immediately tries the key in the door. The key was too small for the cell door, but after working it a little it opens the cell.

I feels a little nervous so I takes out my pipe and began smoking. Then to spoil my luck I sees a guard sleeping at the end of the corridor. I quietly tries to get past him without awakening.

He sees me. I think I'm done for when he yells, "You're the devil himself! Let me out of here."

His drops his rifle and ran as if the devil was chasing him. I shrugs my shoulders and picks up the gun and soon ends up in the warden's office. I felt sick, but I had gone this far, I might as well go the rest of the way.

"Hands up!" I commands. "This is a jail break! Which of you is the warden?"

"I am, what do you want?" comes a husky voice.

"I want to get out of here of course. Warden you're going to let me out!" I says to the warden.

"No, I'm not," he answers me.

I fires the rifle, but to my surprise a bolt of light comes out of the gun and melted the wall in back of the warden.

"Burn us down if you will, but I'll not help you," he says to me.

I'M desperate, and thinking fast I suddenly remembers what frightened him. These people had never seen anyone smoke. I hisses at the warden, "So you think you can keep the ruler of Hades in your jail, heh? Watch my smoke!"

I makes a smoke screen around myself then waits for it to dissolve into nothing. Again I speaks to the warden, "Do you want me to bring disaster upon you all? If you don't free me I'll summon a thousand of my servants to aid me."

I gets another bright idea. I had in my pocket a box of flash powder and a box of sulphur. "Watch!" I hisses. I mixed the two ingredients together and lit a match to the junk; a bright flash, a horrible stink. I continued to the warden and his friend, "I've called upon one of my friends. Although you can't see him, he's here!"

"No, please don't tell him to destroy us please! please!" begs the warden, "I'll personally take you out of the prison."

"Well . . . I don't know I like to see my helpers destroy things," I says stalling for time.

"No, don't, I'll become your servant if you don't destroy me," cries the warden.

"No! I wouldn't have you for a servant for all the gold in the universe. But I'll take you up on the first offer," I says sourly.

The warden was only too glad to lead me out of the prison. Outside I said to him, "If you tell anyone of this I bring you into Hades for personal torture."

"I won't even tell myself about it," quakes the warden.

"You'd better not!" I hisses.

Going to the science league I told the white robes about my adventures in the prison. One white robe said, "You shouldn't have done that to the warden; he might get NIGHTMARES."

I said to Jack, "I got to get back to my time because I been here twelve hours already. If my boss finds I'm running around in time he'll fire me."

Back at my home I said, "Whew, what a trip; I had some fun. Well,

goodbye."

"Goodbye, I'll see you soon and we'll go into the past," said Jack as he took off my time machine.

I went into my bedroom and looked at the clock. I had been gone five minutes. This was too much for me so I got out my whiskey and began drinking. I groaned when I remembered what he had said. "I'll be seeing you soon and we'll go into the past."

I grabbed the bottle and drank everything in it.

THE END

BLACK WITH A WHITE STRIPE OR WHITE WITH A BLACK STRIPE?

MOST of us have seen zebras at our local zoos, but strangely enough few of us know anything at all about them.

The zebra, to correct any erroneous impressions, is a wild horse, distinguished by its markings. Its natural habitat is Africa. The word "zebra" itself is an Abyssinian word meaning a black and white stripe.

Zebras camouflage themselves by their markings, copying the background of Africa, which is a place of light and shadows—light filtering through closely growing vegetation.

There are three main types of the animal. First, the true or Mountain zebra has stripes on its body and legs but none on its belly. Although it lives mainly in Cape Colony mountain regions, its habits of life are not essentially different from other zebras. This type resembles an ass in shape.

Larger than this is the Abyssinian zebra, called Grevy's zebra, which resembles more closely the horse we are familiar with. Its mane and tail are fuller than the other's and its body is larger. It is striped all over.

The third type is Burchell's zebra, distinguished from the other two in that it has no stripes on its legs. The home region of this zebra is hidden with tall grasses, so that leg stripes, which it does not have, would be useless for natural animal camouflage.

Of the entire horse family the zebra is the least independent and snobbish. Horses, usually,

are very aloof and have little respect for other animals, man being the exception. Zebras will not work, but they behave themselves with modest dignity and never cause trouble.

Zebras, like all other wild horses, travel in herds. Ordinarily twelve or fourteen form a company to rove the wilderness of Africa. They usually have a leader to warn them of danger or find them better grazing grounds.

Remarkably enough, the zebra differs from other wild horses in its amazing desire to fraternize, graze and travel with other creatures. Close "friendship" is often observed between the zebras, the ostriches, and the gnus, an African antelope. The gnu has the legs of a stag, the muzzle of an ox, the neck, rump and shoulders of a horse and a heavy beard under its chin. It has a highly advanced and keenly developed sense of hearing.

Here, indeed, is a fantastic alliance between the three—but a very valuable and effective one. The zebra adopts a group of gnus, who also travel in small groups, and several ostriches into its own herd. If tall foliage prevents both zebra and gnu from seeing an enemy, the ostrich spots it and the whole group is warned, thereby escaping. If the invader is careful not to be seen, but the least bit noisy, the gnus' delicately tuned ears can detect it. But if the enemy is neither audible or conspicuous, the zebra, with its sharp sense of smell, gives the warning. The threesome have a pact which is difficult to upset or throw off guard.

AMAZING FACTS

By A. MORRIS

TREASURY GOLD MAY GO TO WAR

COL. MAURICE E. BARKER, Chief of the U. S. Army's Chemical Warfare Service technical division recently made a suggestion in an address before the College of William and Mary in which he advocated the loan of some of the gold and silver in the U. S. Treasury vaults for speeding munitions production.

The gold utilized would not be used up and could be returned to the Treasury after the war was over.

Since corrosion-resistant metals for chemical plants are scarce, the precious metals could be used for linings of reaction kettles and stills. There is great danger that present glass-lined vessels may fail and stop necessary production of chemicals. Substitute food containers, Col. Barker said, could be made from cotton formed into sheets and bonded with plastics made from corn cobs.

* * *

BOVINE TB ERADICATED

THE United States Department of Agriculture has announced that tuberculosis of cattle is now practically wiped out throughout the country.

After testing and re-testing for infected cattle, every county in every state in the Union has fewer than 0.5 percent of its cattle infected.

This campaign has been going on for twenty-three years, in the course of which more than 232 million tuberculin tests and re-tests have been made and about 4,000,000 tubercular cattle detected and slaughtered.

Now that bovine TB is under check it does not mean that nothing further remains to be done. Re-testing is still needed, especially in herds from which tubercular cows have been removed in recent years, to prevent re-infection and a new spread of the disease.

* * *

WHEN TO LOOK FOR NORTHERN LIGHTS

THE best time of the year to look for the outstanding display of the aurora borealis, or northern lights, is in September and March, according to Dr. C. W. Gartlein, of Cornell University. Such displays occur most frequently at the equinoxes, in latitudes 45 to 60 degrees, as measured from the earth's magnetic poles and equator, which includes a large part of the United States.

Dr. Gartlein's studies also indicate that the magnetic storms which are often associated with

the aurorae, occur most often at these times of the year also. He stated that both the storms and aurorae are subject to a cycle of eleven years, like the spots on the sun, but the peak of the storms and lights comes after that of the spots.

* * *

RADIOACTIVE CADMIUM FROM SILVER

DR. A. C. HELMHOLZ, of the University of California, reports that a form of the metal cadmium which gives off radium rays and lasts many weeks is the latest product of modern alchemists who turn one kind of matter into another. The radioactive cadmium is made by bombarding silver with deuterons, or atomic bullets from the cyclotron at the University of California.

* * *

RAW EGGS NOT AS DIGESTIBLE

WHEN the farmer takes a freshly layed chicken egg from the nest and swallows it raw he is not getting some easily digestible protein as he may think he is.

Dr. Donald D. Van Slyke, of the Rockefeller Institute for Medical Research, told the American Association for the Advancement of Science, to really make egg white digestible, boil it hard, then rub it into fine particles through a sieve.

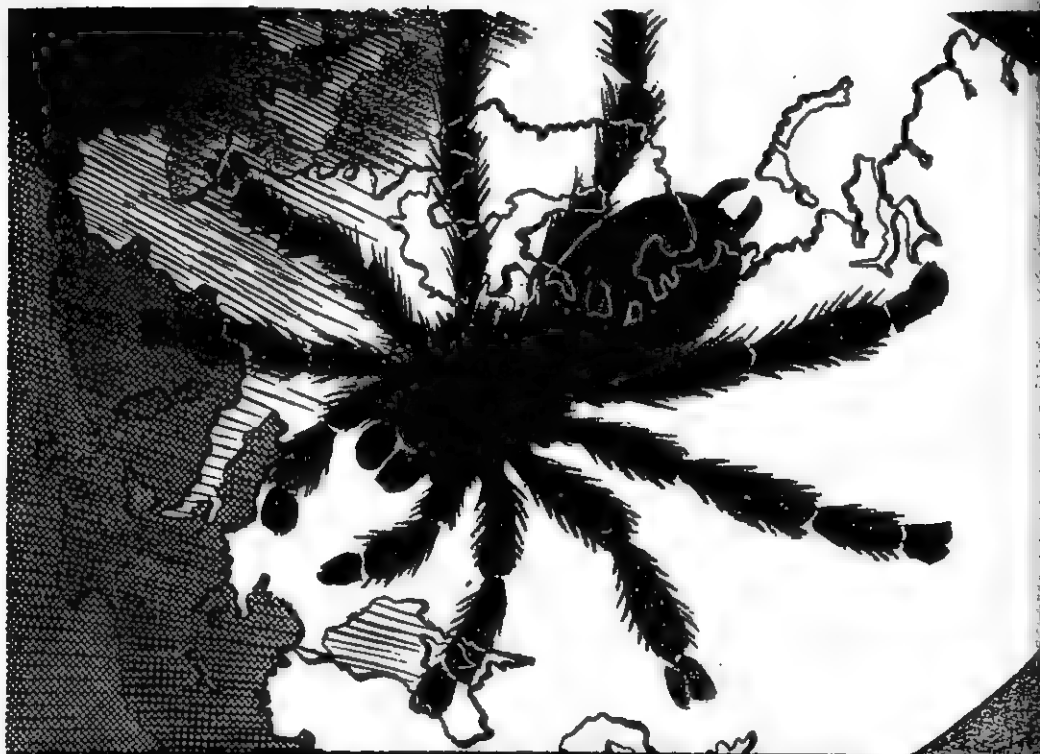
Dr. Van Slyke's speech had to do with the physiology of the amino acids, which are the units of which proteins are composed. The human body must have 21 of these amino acids. It can manufacture ten itself out of other materials if they are not supplied from outside sources. The other eleven cannot be synthesized within the body. They must come ready made, or a person will starve.

* * *

NEW STRUCTURE IN HEAD

DR. STACY R. GUILD, of the Johns Hopkins University, revealed that he had found a new structure in the human head. It consists of a tiny flattened mass of exceptionally fine blood vessels, intermixed with flattened cells and supplied with nerves, the whole structure being smaller than the head of a pin. It is located immediately below the bony floor of the middle ear close to one of the more important head nerves.

The function of this structure is not known, but Dr. Guild suggests that it may have something to do with the regulation of blood circulation. He also suggested that similar bodies may exist elsewhere along the peripheral circulatory system. He proposed the name *glomus jugularis* for the structure.



SHADOW OF

by LEE FRANCIS

Clouds of tiny black spiders dropped out of the sky and when a woman was bitten, she died. It meant Man's end, unless . . .

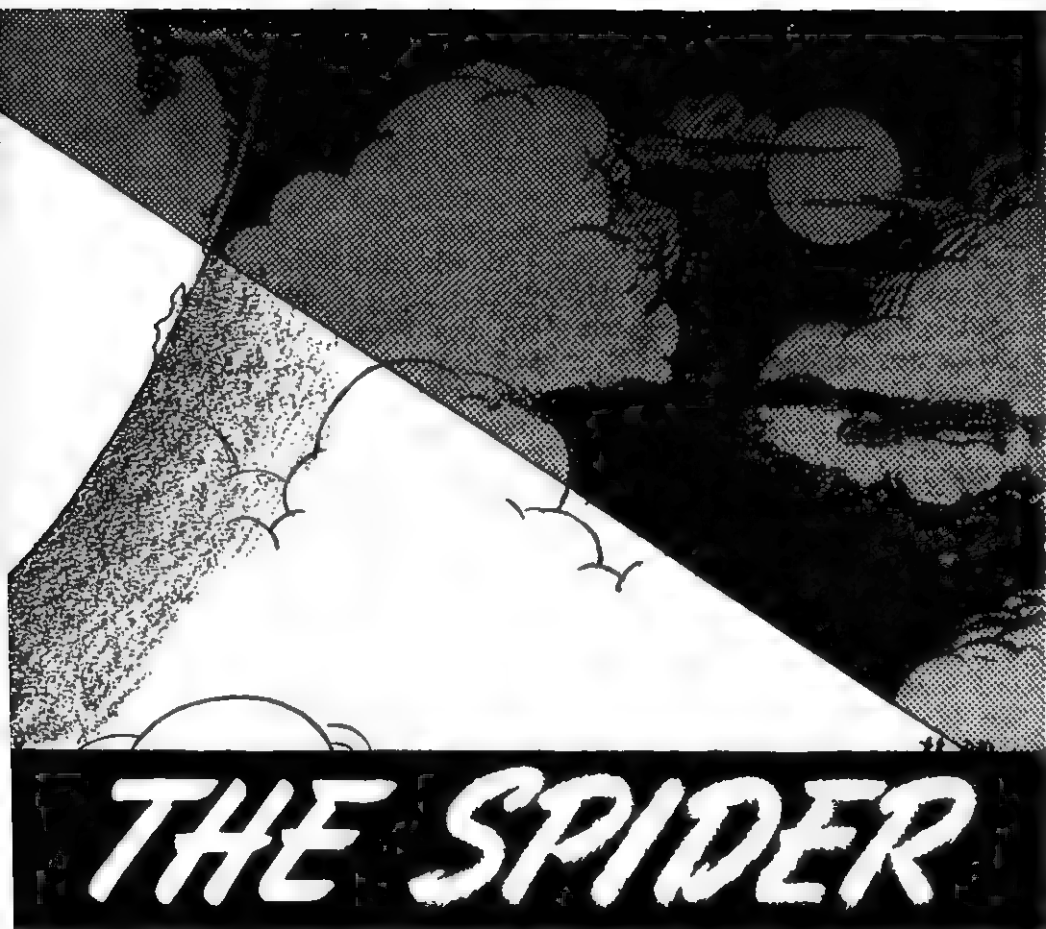
THE big space freighter, U4 was tipped half over on its side in the slimy, stinking mud. At the bottom of the filth-covered ladder that climbed the space ship's flank, Bob Nolon wallowed knee deep in the muddy scum of the pit.

Within the U4, every motor was straining. The mud sucker puffed and sputtered eagerly under the hull of the

ship. The tube attached to it sent a steady stream of mud and digested junk out the other side of the ship.

For the past twenty-four hours Nolon had been waiting for the rusted sides of the treasure ship, U30 to appear above the mud where it lay buried. Now, one side was revealed.

Good natured "Slim" Jarvis struggled from the hatch of the U4 and crossed



the deck to where he could get a clear view of Nolon and the pit below.

"How's she look?" he shouted.

Nolon turned and his boots sucked out of the mud.

"Great," he admitted. "But I hope the next time they crack up a shipload of gold they pick a nice high hill with plenty of dry sand. Wish we had some of those mythical Spider Men supposed to be on this planet to help us."

He rubbed a sweaty hand across his chin. It left his face streaked with black. He climbed the ladder slowly.

"Oughta be able to open her up by morning." Slim observed the progress that had already been made.

Nolon looked back at the rusted, cor-

roded side of the U30 with a satisfied grin. Then he stretched out on the deck, legs crossed and arms locked under his neck. Down below the mud sucker went on about its filthy task.

"A foggy night, miscalculation and another ship captain sent his boat into the slithering old mud pot, Venus."

"According to the treasure maps," Slim said, "looks like Nolon Enterprises will be in the money again when we take that old tub apart."

"Venus," Nolon groaned. "How those oldtimers could call this baked mud pie a 'twin' planet to Earth, I'll never know."

Slim Jarvis laughed. "You and I have brought treasure back from every

hole between the Sargasso and the rings of Saturn. Let's finish this job up next week and head for Long Island and a Turkish bath."

Nolon didn't answer. His mind was already on the boardwalk, with a lovely little wheat-headed girl at his side.

Then abruptly, Loo Wung, the solemn-faced Martian cook poked his turnip-shaped head above the hatch. His voice was soft and toneless.

"Master come pronto—radio try make talk—can no understand."

NOLON got to his feet hurriedly, crossed the deck and dropped down the hatchway. Inside, fans hummed softly. It was much cooler. Why should New York be putting through an unscheduled call on the private wave?

Loo Wung stepped aside at radio room door and Nolon ran in, flopping hurriedly into the chair before the telescreen. The incoming blinker was flashing wildly.

He flipped up the receiving lever and watched the worried image of Ward Lake, the New York manager, etch itself across the screen.

"Good God! Nolon!" Ward Lake's face was strained and white. "I've had an awful time reaching you. Something terrible has happened. You'll have to return home at once."

"Take it easy, Ward," Nolon cautioned. "It can't be as terrible going slowly mad with the heat out here on this globe of mush."

"Listen, Bob," Lake only called Nolon by his first name when some crisis was close. "Yesterday a terrible epidemic hit Earth. It's killing every last one of our women. Spiders, clouds of them, in the air. Their bite is . . ."

His voice broke in anguish.

"My wife," he continued haltingly. "We buried her and a hundred others

last night, here in New York alone."

"Good Lord, Lake, I can't believe . . ."

Ward Lake was talking swiftly again. Talking as though the words were there and came without his bidding.

"Earth scientists don't know where these killers are coming from. They are about the size of your little finger nail. Every city on Earth has suffered from the first attack. It seems as though someone is making a deliberate attempt to sterilize our race."

Loo Wung left the door and shuffled slowly away down the galley.

Nolon said slowly.

"You need me? How about Sylvia? Is she safe?"

Lake's lips quivered, his mind full of his own loved one dead but a few hours.

"Sylvia is safe for the time being at City Hospital. Doctors have taken command. All women have been barricaded within health centers and clean-up squads are trying to kill the pests. It's an impossible job!"

"Look for us at the field in forty hours," Nolon snapped. "We'll leave the coffer dam here and pull everything for a quick flight."

Ward Lake's face relaxed.

"Thanks, Chief," he said. "I don't know what you can do to help, but I'll feel better with you here. If anything happened to Sylvia I'd never forgive myself."

THE screen blanked. Nolon turned toward the door. Slim Jarvis was already gone. Nolon heard him in the distant deck housing, giving low, tense commands to the crew. Nolon went directly to the control cabin. The control crew were at their stations. A thin-faced rocket man approached him with a sharp salute.

"We've all heard what happened,"

the rocket man said in a low voice. "We've got wives and kids at home. There'll be no time lost."

Nolon put a hand on his shoulder.

"Keep your nose clean," he said gruffly. "Everything is going to be all right."

FIVE hundred miles above the tiny strip of yellow and green that was Long Island a sleek black space ship leveled for a landing. Rain had washed the mud from the U4 and its sides glistened.

They were well within the gravity pull. Nolon stood by the main control board, watching Slim Jarvis closely.

"Ready for the descent." Jarvis lifted his tired eyes from the map. "We're on the beam."

His head dropped again. Nolon nodded slightly, tossed away a cigarette that had hung between his lips. The freighter dipped its nose and went plummeting downward.

"Spotlight on, Mister," Nolon said tersely. "Shock gear down."

The crew worked swiftly. Great shock springs dropped under the ship's nose. The spotlight top-side broke into a powerful searching glare that outlined the dock now a scant five miles below.

A hiss of excitement went through the cabin. Nolon turned toward the observation glass, his face blanching white.

"My God!"

"A giant spider!" Slim caught his breath.

On the landing dock, full in the center of the beam of light, walked a huge black spider. It was at least five hundred feet from the fearful hairy head to the last grim, dragging leg. Then, slowly, a chagrined look of realization replaced the momentary look of horror on Bob Nolon's face.

"The spotlight!" His voice was relieved. "Must have picked up one of the little devils on the lens. It's magnified by the distance."

His deduction proved itself as they came in quickly for the landing. The shadow spider grew smaller, fading from sight entirely as they nosed into the dock.

The mystery had been good for the crew. When he dismissed his men, Nolon found them chuckling among themselves over the incident. This, he thought grimly, was better than having a group of discouraged, frightened husbands on his hands.

A single plasticoupe awaited him on toward it, hesitated as Slim Jarvis came the deserted field. He started to walk toward him.

"I've asked the men to find out about their families, and then to report to the union room."

"Thanks," Nolon said quietly. Their hands met in a silent grip. "Good luck, Jarvis. If your wife is safe, meet me at City Hospital this afternoon. I've a hunch we'll be busy and the crew may as well work together. We're accustomed to each other."

Jarvis nodded, strode away through the darkness.

WARD LAKE, the slim sober-faced New York manager, was already waiting for Nolon, his foot balanced on the side of the coupe. They shook hands silently, and in spite of himself, Nolon felt that Ward Lake may have been more alarmed than there was any reason to be. Thus far there had been no spiders, except the one on the spotlight. The field was entirely normal, though deserted.

"I came as soon as I could," Nolon said simply. "Did Sylvia come with you?"

A heavy, masculine voice came from

the darkened car.

"Are you crazy, young fellow, or don't you realize what you're up against?"

Nolon's face lighted.

"Doc Franklin! So damned dark, I didn't see you, sir."

The doctor, a middle-aged man with silvered hair and carefully trimmed vandyke climbed stiffly from the car. He shook Nolon's hand with both of his and lectured at the same time.

"I assure you, Bob, things are even worse than Ward told you. But, come. I'll be needed at City Hospital. Sylvia is waiting for you there."

They climbed into the car hurriedly. The coupe flashed over the smooth field and up the turnpike that led toward glowing skyscrapers.

"Where are these damned spiders?" Nolon asked impatiently. "What's the story?"

"You'll see soon enough," Doctor Franklin said bitterly. "It will be clear to you that all Earth faces a crisis. *Much too clear for your peace of mind.*"

Then, as they passed the last space ship dock and entered the three lane traffic highway, all the utter terror of Ward Lake's telascreen message made itself evident. At first Nolon saw only the thick carpet of crawling, hairy things on the road. The coupe hit them as it would hit a snowdrift, plowing ahead slowly. The air was full of weird, white clouds. They drifted down slowly and Nolon saw they were giant spider webs, covered with thousands of the small wriggling death spiders.

They floated down in great masses, obscuring the moon with a silvery shining blanket of death. Spiders swarmed across the highway in waves, covering the fields, climbing eagerly over every man-made object they met.

Nolon shuddered.

"You say these things can kill a

woman with a single bite and yet are harmless to men?"

Doc Franklin nodded helplessly.

"Sylvia, or any woman for that matter, isn't safe outside the established protection zones. Thus far the invasion has confined itself to highly populated sections only. We've rushed the female population into safety spots and protected them as best we could. I tell you, Bob, this thing has to be stopped before we have no more women. No power to live, fight, or reproduce."

His head dropped forward wearily, a man trying to fight odds that had already overcome him.

Ward Lake swung around in his seat, his mouth bitter and frightened by all he had seen during the past terrible two days.

"We haven't been able to stop it," he muttered. "They'll never stop this invasion. It was planned by the devil himself. It's killed my wife and it will kill all the others before it stops."

DOCTOR FRANKLIN made no attempt to answer. His head had dropped forward, motionless, and he slept from sheer exhaustion.

They were in the outskirts of New York now. Here, the spider army was even worse. Webs hung like growths of Spanish moss from every building, every immovable object. The streets were crawling with the things.

They plowed steadily ahead, at times reaching almost open sections of pavement where clean up squads were at work. The men of the city were equipped with gas masks, insect killers of every known type, and shovels. With these pitiful instruments, Earth was attempting to protect itself against an invading army so ghastly that even now few realized what they really fought. Nolon realized and his heart sank within him at the size of the task ahead.

The plasticoupe halted before the door of City Hosiptal.

"Ten thousand women inside that building," Franklin said, and climbed stiffly out of the coupe. "Already spiders are finding their way through unprotected crevices. Dozens of women have died in this building alone, since last night. Every hour the slaughter grows worse."

Nolon's boots crunched into the swarming mass as they climbed the steps to the main entrance. He kicked his way through them.

They entered the main lobby, followed Doctor Franklin toward a wide shower of liquid stuff that shot from makeshift pipes against the ceiling.

"Emergency showers have been constructed," Ward Lake explained. "After we've been sprayed by insect killer we'll get into the hospital proper. Not before."

SYLVIA FRANKLIN was a fragile-seeming, small-boned girl. Neatly arrayed in a starched nurse's uniform she caught Nolon's eye at once. She ran toward him.

"Bob!"

In three long steps he met her, and she was in his arms. Her smooth, cool cheek pressed to his.

"I'm so glad you've come." Her voice was low and sincere.

"I left Venus as soon as Ward called," he said, releasing her. "I'm glad you're safe."

For the first time, tears welled into her eyes. She brushed them away impatiently, put her small hand in his big, brown fingers.

"Bob," Sylvia said, "I don't know what we'll do. The thing is here and we'll have to go on fighting, until . . ."

Her voice broke into a little sob and again she was in his arms.

"I'm frightened—horribly."

A shudder coursed through her slim body. Nolon swore softly under his breath. A slow, forced smile covered his face.

"Wait a minute, fella'," he put a finger under her chin and tipped her head back until his eyes looked straight into her own. "Where's that Franklin chin? There are a lot of brains working on this thing. Keep your chin out for a few hours until science has the answer. This thing is going to work out all right."

The sun broke through and her face lightened.

"And what will you be doing?" she asked.

For an instant Nolon was stumped. What should he do? He remembered with some misgivings, Lake's words when they talked on the telascreen.

"I don't know what you can do to help."

Then he remembered the cleanup squads that were working in every city street.

"I'm going to organize a cleanup squad from my crew," he explained. "At least we'll be doing something to help."

She smiled bravely.

"Then you'd better get started," she suggested. "I'm supposed to be on duty in the sick ward. We can't tell when those horrible creatures may find their way in. Some of the patients are unable to give warning."

He bent over and holding her shoulders firmly, planted a kiss on her chin. Then her shoes clicked firmly on the stone corridor and she was out of sight behind the white swinging doors. Nolon turned on his heel and started for the lobby. He wondered dully if he would ever see the girl alive again.

THE cleanup job wasn't a pleasant one. Nolon had his men spread

across the pavement, moving slowly ahead. The insect spray guns came first, and behind them the shovels and carts that carried away wriggling death by the hundred pounds. The job was a hopeless one. As soon as one shovel-ful of dazed and dying insects were scooped up, another horde swept in to take its place. Nolon swore, and slapped at his body as they swarmed over him, biting and clawing at his flesh.

The spiders dropped about them from every object. They swarmed and tumbled wave on wave across rooftops and over the streets. They seemed cursed with an uncanny faculty of finding the women. City Hospital was a wall of black, hairy terror holding back death for no one knew how many more hours.

Several times during the day, Nolon had seen long lines of coffins roll by the truckload away from the alley entrance of the hospital.

Toward midnight, exhausted and discouraged with the little his men were accomplishing, he leaned on his shovel and motioned for Slim Jarvis. The whole vast area of sky above New York was a layer of white, pulsating webs. Slim kicked and swore as he made his way through the ever increasing waves of killers.

"Pretty hopeless job," Nolon said. "Slim! Can't we do better than this? Shoveling up these spiders won't help. We've got to get to the bottom of the problem. Kill them at the source. This way the job is impossible."

Jarvis wiped his face with a sweep of his arm. His face was streaked and bitter.

"Scientists are all right," he said. "But they have to work slowly. To make sure what they are doing. Bob, I think this job was made for us. We can dive into it headfirst and think

about it later."

They retreated to a fairly clear spot inside an office door and sat down.

"That's what I've been thinking for the past ten hours," Nolon admitted. "Look, Slim, this was planned. These spiders couldn't have drifted into the gravity pull, at least not so many of them, without some assistance. If we can find out where they came from, then we can put pressure on the source and get somewhere."

"Suppose someone in outer space is *dumping* them out to weaken earth for an attack?" Slim searched his pockets, found a cigarette and puffed at it eagerly.

Nolon groaned.

"That's just it. We haven't the slightest idea of where to start looking. Yet, allowing this thing to go on is nothing but slow suicide."

He accepted a puff of Slim's cigarette, inhaled deeply and exhaled a faint blue smoke ring. Then he sat up as though shocked into a new line of thought. With an oath Nolon was on his feet.

"*That spider shadow we saw!*" he said excitedly. "Why didn't I think . . ."

"What's burning you?" Slim was at his side. He followed as Nolon turned and started hurriedly toward the hospital. "What about that shadow?"

THEY reached the hospital doors and Nolon rang the alarm bell impatiently. As they waited, he turned.

"The shadow of the spider that we made on the space dock," he answered. "If we had hit that spider coming in for a landing it would have been crushed. It must have been *under* the lens of the spotlight."

Slow realization dawned on Slim's face. Somewhere inside footsteps approached hurriedly. The doors opened and Nolon spoke to the lantern-jawed

nurse who waited just inside.

"Please get Doctor Franklin at once. Tell him Bob Nolon wants to speak to him. That it's important."

She nodded and turned away. The safety doors closed again with a bang.

Slim Jarvis looked as though he had seen a large and unfriendly ghost.

"I had that spotlight all torn down last week, when we were on the U30 job," he almost whispered.

"Then," Nolon said slowly, "we must have picked up that single killer on Venus."

"There ain't a spider *on* that muck-bank," Slim protested. "Nothing but water and gumbo."

"Did you ever hear of the Spider Men?" Nolon shot out. "On the opposite side of Venus there is a rank growth of swamp and jungle. The Spider Men are a direct line growth from their smaller brethren. They haven't the brains, imagination, or strength to fight a battle. They are a helpless and brow-beaten people."

"Then why worry," Jarvis asked. "Could a gang of animals like that do us any harm?"

Doctor Franklin's footsteps echoed in a far corridor.

"Let's assume that someone who *did* have brains were to lead this race. *Suppose that they decided they deserved a better world to live in. A world where man had already provided every comfort.*"

"Then," Slim agreed, "They'd probably use something that *was* powerful enough to overcome us, and pick up the bones later."

"What's this?" Doctor Franklin's dignified figure forced itself quickly through the door. "Hello, Bob, what can I . . ."

Nolon took the doctor's hand quickly, his eyes were bright now, and eager for the quest.

"We've hit on something that may be a hot lead," he explained. "We're going back to Venus."

Franklin's face mirrored his disappointment.

"But!" he stammered, "under the circumstances, don't you think your place is here?"

Slim Jarvis intervened.

"Don't get us wrong, Doc," he begged. "We're not backing out. Bob thinks these spiders may come from Venus. He believes the Spider Men may be at the bottom of this thing."

In spite of himself, Franklin chuckled.

"Those hollow headed animals?" he protested. "What makes you think they'd have the brains . . .?"

Nolon interrupted. He told Franklin quickly, the same thing he had just finished telling Slim Jarvis.

"So you see," he added, "it seems important enough to merit a try. If we fail, there is very little lost."

Franklin nodded.

"I'm afraid you're right, son," he answered. "Go ahead, and God bless you."

Nolon said, "There's one more thing."

"Yes?"

"Don't let Sylvia know until we've left Earth. I can't take a chance, and I hate to say goodbye. It would be hard, the way things are."

WHEN the U4 took the air, its rocket chambers had been cleaned and reloaded for a long trip. It shot up swiftly through the clinging cloud of webs that had now drifted over the city for as far as the eye could reach.

"Slim!" Nolon's voice was hard again. "Set your course for the site of the U30. When we get in close, follow the curve of the planet and keep just off surface. Watch for likely land-

ing spots in the jungle land and have the crew stay alert for any sign of life. Call me the moment anything strange is sighted."

Slim nodded a little sleepily.

"Right! Get forty winks and I'll knock off for a few minutes later on. We can take care of things until the trouble starts."

Nolon took one look back through the sights, at a tiny Earth drifting lazily below them. He opened the control room door, went out and pushed it closed behind him. Opposite the galley door he hesitated. Loo Wung was carrying on a heated argument with someone inside the tiny kitchen. Nolon went forward on tiptoe and looked around the edge of the door.

Sylvia Franklin was standing just inside, her back turned to him, arms akimbo. She threatened the Martian cook with a huge soup ladle.

"And if you tell a soul . . ." Her voice drifted away as she twisted around, following Loo Wung's gaze.

"Don't let me bother you two," Nolon said.

"Bob, oh! My goodness!"

"Your goodness has nothing to do with this," Nolon answered. "You are supposed to be on Earth. This is no place for a girl, even if I do love her and she's worth her weight in gold."

Sylvia's eyes flashed defiantly.

"I don't care if I *am* a stowaway," she said. "I'm just as safe here as I was at City Hospital."

"There are opinions to the contrary," he said. "But skip it. We can't turn back now."

Her pretty face clouded.

"Oh! Bob, I didn't mean to hurt you. It was—well—I just couldn't let you go away alone. Dad acted funny and I threatened him until he confessed the whole thing."

She came close to him, her eyes

pleading warmly.

"Would it help if I were to show you how I can be made safe. How I can go right among those spiders and not be harmed."

He nodded, putting one arm around her waist.

"That's the object of the whole trip. To make you *all* safe."

She kissed him, fully on the lips. Nolon's arms went around the girl, crushing her to him. Behind them, Loo Wung tittered in amusement.

"Boss man have arms like space octopus!" Then the Martian cook made a mad dash for the galley pantry, escaping by a hair the heavy frying pan that Nolon sent crashing after him.

"Come with me," Sylvia urged. "I'll show you something."

They went toward the store room and she made him wait in the silent hall until she emerged. She was safely encased in one of the light plia-metal diving suits Nolon used for tough air diving jobs. Within its shining, grotesque folds she looked like some strange under air creature from the stranger planets.

Sylvia's voice came muffled through the communication slit.

"I saw this suit when I was on your ship last year. There isn't a spider in the world that can bite me now. Am I a welcome passenger?"

Nolon put his arms around her and gave the heavy suit a bear hug.

"It's a little tough on my love making," he admitted. "I guess you've got all the answers, so be a good girl and I won't pitch you overboard."

HOURS later Nolon was watching the muddy side of Venus as it came up slowly on the map-glass.

"We're about a thousand miles out from the U30. Right?"

"Right!" confirmed Jarvis.

"Good," Nolon said. "Change course and start to circle the planet. Have all lookouts posted and let me know the minute anything suspicious is sighted."

Under Nolon's direction the U4 sank down swiftly and started to cruise over the muddy, bubbling crust of the planet. Hours passed. The ship's atmosphere grew hot and the fans and air cooler units were turned on.

The night closed in thick and heavy. The U4 went forward at half speed, keeping just above the fog that arose from below. Nolon allowed them to burn no lights.

"Ship dead ahead—cut your speed!"

The sharp outcry echoed over the ship's speaker system from the forward watch. Nolon jumped, slammed the quarter speed levers down with a bang. He whipped around.

"Sylvia, get into that space suit and stick with Slim Jarvis. Slim, you supervise the controls personally. I'm going forward. Keep your ears glued to that speaker. Post more watches so we won't find ourselves in a trap."

The control room seethed quietly with the new activity. Nolon slammed the door and dashed the length of the ship's nose. He twisted up the forward hatch and dropped into the transparent bubble of glassine beside the watch.

The man pointed ahead through the darkness. His face was set in that odd way that indicated grim success after a long day of failure.

"I take it to be an earth freighter. The type the city used to have for garbage. There's a low, underslung section that tips out for the disposal of junk. We've been on her tail for several minutes. At first I wasn't sure."

Nolon tapped his shoulder.

"Good work. Now, get back and have forty winks. You've done a good job. I'll take over."

"Thanks, Captain!" The man went

up and out of the bubble slowly.

Nolon was already on the phone.

"Slim!"

"Aye, sir," Jarvis was cold, business-like once more.

"Speed up slightly. Have you spotted her on the map glass yet?"

"She's right in line," Slim admitted. "Can't see her well enough to gauge the distance yet. What do you make of it, Bob."

"It's an earth ship. Type was junked twenty years ago. Built for dumping garbage."

"Or spiders?"

"That's what I'm thinking," Nolon admitted.

The ship ahead burned a single red light. It picked up speed now, and suddenly disappeared from sight. The light blinked out.

"Full speed!" Nolon shouted. "All rockets open wide for twenty miles."

The U4 jerked ahead with one jet of flame.

"Cut!" Nolon shouted.

THE ship went silent and drifted just above the spot where the strange freighter had disappeared. Below, faintly visible against the dark ground, four tiny green lights blinked in a large square. As he watched, they went out abruptly.

"Did you see that?" Slim shouted. "Looks like a landing field below."

"Right," Nolon made a quick decision. "Sink down slowly. Stay at the edge of the jungle and away from where those signals were burning. At the first alarm, come back out like a hornet."

"How about the girl," Jarvis asked a little grimly.

Nolon's face was wet.

"She's fairly safe in the space suit," he answered. "She'll have to take the same chances we do."

The phone went dead. The U4

started to sink down slowly into what seemed a blank of tangled, blackened jungle.

Hurrying back toward the control room, Nolon heard the hurried voices of the crew as they went about their jobs within the ship. He personally supervised the opening of the main hatch and saw that a fire gun was laid out for each crew member.

The U4 touched the ground softly, bounced a few feet and settled into lush grass. The jungle had been cleared away from an area of perhaps a mile. Nothing was visible except the faint glow of the wet meadow. Through the darkness of the ship, Nolon rounded up his men.

"I'm going outside and look around," he said as they gathered on the deck. "You men all are armed. Stay here and Jarvis will be in command. He knows my signal."

"What about that freighter that landed?" Sylvia Franklin came through the hatch, clothed in the cumbersome space suit. "This may be a trap."

Nolon nodded.

"I'm afraid of just that. That's why I don't want us to leave the U4 until we are sure. Slim, you know the whip-poorwill whistle. If you hear it, you can all come after me, but silently. Otherwise, wait until I return."

"I'll be there with my little hatchet."

Nolon let his feet hang loose over the edge of the rounded ship, pushed away from its side and jumped. He hit the soft ground with a bounce and his knees jerked up painfully. Ahead a few yards one of the landing lights stood dark and high against the dark grass land. He worked toward it slowly.

Behind him, against the side of the ship there was the sudden rough, grating sound of a boarding axe. He froze upright, knowing the meaning of the sound. Footsteps, stealthy and smooth

sounded on all sides. He started to dash back toward the U4 and tripped over something in the high, rank grass. Nolon pitched forward flat on his face, a shout of warning jerked from his lips. Something hit his back like a ton of bricks and at the same time the field went white with powerful light.

NOLON twisted and turned, trying to fight his way from under the spider men who held him pinioned to the grass. A high-pitched scream of horror cut the night. Dully he could see what took place on the high deck of the U4. They were dragging Sylvia Franklin over the rail. His men had been overcome by force of numbers.

Cursing loudly, he managed to turn over on his back, stared up at the three hairy, spider-like monsters who held him. Their limbs were thin. The entire body was covered with thick, black hair. The face was a pair of fuzzy beaked claws that opened and closed spasmodically.*

* The Spider Men of Venus demand no great amount of explanation. Their existence of course is well known. Only one thing prevented their being destroyed long before Nolon saw them. The race of Spider Men were of a low mental and physical order. Unlike man, their evolution was retarded. This section of Venus was at first a steaming jungle with spiders as its only inhabitants. Gradually, through natural evolution, they changed. Their bodies took partially the form of men. However, they never developed mentally. Their life was simple and they lived on the lower members of their own race. They knew no better life and therefore did not wish for better than they had.

Professor J. R. Higgerbothon of the New London Laboratories describes the spider man as follows: "He is a low type mentally, usually ranging about five feet tall. His body is not unlike the ape, with arms that reach the ground. However, unlike the ape, his limbs are slim and covered with a stiff hairy stuff. He has no face as we understand it. In place of a mouth, the spider man had developed two claw-like jaws that move continually when he is excited. A saliva-like stuff drools from his mouth and hardens into the same material that usually is found in spider webs."—Ed.

Nolon tried to force himself upright under their combined weight and felt himself slowly pushed down again, his shoulders against the grass. Something came down hard and solid against his skull and bright lights whirled crazily inside his head. Like a man going under ether, the hubbub of sound grew far away and metallic, like the noise of a worn-out record. His body went limp under his captors.

The low, smoking tunnel through which the spider men dragged Nolon seemed like something from a cave man's nightmare. The spot on his head felt as though a truck had hit him. He opened his eyes again and stared around. He was hanging head down, hands and feet bound to a long pole. The pole was slung over the shoulders of four spider men who were careless of the human cargo they carried. With difficulty, he managed to lift his aching head to the level of his body. The tunnel widened into an open, sandy cave and he was dropped rudely. A commanding voice came from ahead of him, behind the blaze of wall torches.

Nolon felt the hairy, fumbling hands ripping away his bonds. He tried to stand up and fell back weakly into the dirt. Rough arms jerked him upright. He lifted his head and shook the hair away from his face. He drew his arms away from the men who held him and stood still, staring with wonder about the cave.

It was a rough-walled circle of about thirty feet in width. Into the walls were thrust heavy torches that sent out a brilliant flow of flame. Smoke from the fire covered the roof and everything in sight with a heavy coating of soot. Spider Men sat in a huge circle about him. At the far end of the cave, sitting on a raised chair made of logs and spun rope was the leader. The man was short and greasy with fat. The hair that

stood stiffly away from his body was dirty and a faded gray.

His head was squat and his beaks were oiled with a recent meal. Yet, the man on the rough throne had eyes that were not dull and listless like the others. They sparked like tiny dynamos of energy as he addressed Nolon.

"You are wondering many things," the voice snapped out sharp and eagerly. "Ask your questions. I will answer."

He sat back, leaning against the logs that held his rounded back upright. Two great torches burned on either side of his throne.

NOLON took a step forward and the place came alive with threatening sounds. The leader muttered quick, unintelligible threats and the spider men were silent.

Nolon reached for a cigarette. He started to light a match, but the leader raised his arm and shouted sharply.

"Stop!" His eyes were glittering-dangerous. "My people fear fire. I have only recently gained their trust, that they live with torches for light. If you were to light that match I might not be able to save you from their anger."

Nolon let the unlighted match fall from his fingers.

"Sort of a keeper of the light, are you?"

The men around him didn't understand his words, but they detected at once that his voice was tinged with something they did not like. The leader was forced to raise his arm again. The spider man stood up and came toward Nolon. *He walked on all fours.* He stood upright before Nolon's startled face.

"Your men and the girl are our prisoners." His hairy jaws were close to Nolon's face. "You will all die before

the sun shall rise again."

Nolon felt the cigarette, still unlighted between his lips, go suddenly dry and tasteless. He spat it from his mouth.

"If that's the plan," he asked sourly, "why the midnight stage show?"

The leader seemed for a moment about to strike him down. The jaws worked furiously. Then the man got control of himself and his words were low and earnest.

"Because you are the first man I have met to whom I can tell my story and be appreciated. Every person who has been to your civilized world is proud to be able to talk to others of his accomplishments. My own are so many, and I have little chance to be appreciated."

The conceit of this creature was as wonderful as it was disgusting, Nolon thought. Perhaps if he could stall for a while . . . ? It was, strangely enough, beginning to make sense. Here were a mud-drenched, jungle-trained race without imagination who had no wish to better themselves. Yet, this creature was leading them to Earth. Forcing himself, through them, into power over all men. He shuddered at the idea of these hairy, claw-faced creatures swarming over Earth cities.

The spider man was talking swiftly, as though eager to brag of his accomplishments.

"My name is Larus. You are a brilliant young man." His jaws worked up and down automatically. "We lured you into our land because we knew you could cause us trouble."

"That freighter?" Nolon asked. "It is the same type you have used to dump your death cargoes on Earth?"

Larus chuckled. His eyes were like brittle steel.

"We have a thousand such ships, all salvaged from your junk yards. They

are ideal cargo carriers. With them we are ready to escape this hell hole of our ancestors."

NOLON was aware of a mounting tension in the cave. Spider men arose, and a widening circle appeared around the throne. Far away down the tunnel from whence he had come there was a scratching, dragging sound as though something heavy was being drawn through the sand.

"I imagine you realize that our campaign is progressing well?" Larus said.

Nolon nodded. The spider leader returned to his throne and sat down cross-legged. He started to speak swiftly, like liquid pouring from a tight-lipped bottle.

"My people have lived in blackness for centuries. No one feared them because they lacked imagination. You cannot insert imagination into an empty brain. I, through clever disguise, went among your people. I found that they were prepared for any war of armaments. They have one weak spot. Your medical men, as usual, are behind in seeing a way to fight unexpected uprisings of disease. Since time began you have been unable to stop the Black Plagues that have come down on you. They have run their course and left you weak and frightened. *This time you will have no chance to build up what you lose. There will be no way to build. Your women will all be dead.*"

His voice droned on like slow, sinister music. The spider men were nervous. They began to mill about the cave, watching the entrance of the tunnel. The heavy, scraping sounds were close. The cave became unbearably hot. Nolon dried his sweating face on his shirt sleeve and listened to Larus as he droned on.

"We have been dumping freighter

loads of our little *pets* on your cities. In a few hours we will attack, seize your weakest points and get weapons to carry on a complete war. Your men will not have the strength or heart to fight back."

Nolon jerked around toward the tunnel, his muscles taut. His back was suddenly pinioned to the wall. A high-pitched gibber of voices stuttered through the cave. Larus was on his feet, head held high, as the approaching spider men came into the room.

Five of them went toward the throne, dragging a huge glass case over the rocky ground. The case was made up of two sections. It looked like a strange fish bowl with an inner and outer container.

Through the haze of shimmering heat Nolon's heart froze and his blood started to pound maddently. Completely nude, her body slouched on the floor of the inner case, was Sylvia Franklin. Her hair was shining strangely under the light of the torches, and it dropped in long, even lines, almost hiding the upper part of her body. Her eyes, as they caught his, were horror stricken.

Then Nolon realized the reason for the spider men's excitement. The outer case, with only thin glass to keep it away from the girl, was full of crawling, flowing spiders. Only a small, tightly closed trap door kept the insects from swarming in over her bare flesh.

SWEAT poured down Nolon's face.

His fists clamped into balls of hate, but his arms hung at his side like the dead weight of lead.

One move and they would fight him to death against the rough walls of the cave.

Then he knew the spider men had started a low-pitched chant of victory. The sound grew and swelled until the cave was a fury of sound. Others were

entering. Slim Jarvis came first, and his crew followed and lined themselves around the wall. There were two spider men with each of Nolon's crew. Larus arose and the cave became silent again. The leader's voice was calm, but his beaks worked up and down in pleasure.

"I can realize the beauty of an Earth woman," he said. "But to my people she is but a sacrifice to the Spider God.

Nolon's answer was bitter.

"You could have no God," he said evenly. "He could not allow you to punish women and children as you have done."

Larus chuckled, and it was like the rough grating of glass against the cave floor.

"*We have a God,*" Larus screamed. "May his body rest on the coals of the sun. *We have a God;* the Spider God who is greater than us all—may his hair singe from the heat of the fire."

Nolon saw now, for the first time, the real fear of the spider people. He saw their hatred for fire and their fear of a Spider God, whom they despised mightily.

His eyes caught Slim's. The thin one stood beneath one of the heavy torches that had been thrust into the wall.

"I gather," Nolon said icily, "that this God of yours is a pretty dangerous character. That if he returned, you'd have some worrying to do."

Larus chuckled.

"It is not easy to kill superstition. This Spider God is nothing but an old legend. He is real to my people, but to me, only a dream of long past centuries. He can harm no one now."

"You have little to fear," Nolon said bitterly, "After all, Larus, the woman killer is a brave man."

The words had their desired effect. The spider leader crouched forward, his eyes blazing.

"Enough of your insults," he growled. "You have seen the clever device we have arranged for the sacrifice of your woman. Her appearance has put ice into your veins. My people demand her death to the Spider God, and I am only too willing to be rid of her so easily. When all women on Earth have died as she will die, we will take your knowledge and let your men die, to be reproduced no more."

THE room was dense with smoke and the sickening smell of spider bodies. Sylvia Franklin sensed that something was about to happen. Her face turned pale and her eyes were for Nolon alone.

Slim Jarvis was following her gaze. Nolon looked directly at him and started to whistle in a low tone. It was the signal of the whippoorwill. Larus shot a look of suspicion at Nolon and then ignored him. Slim was standing tense and still against the wall, waiting for some sign. Nolon's crew knew something was in the air. They waited.

"*For people who fear fire,*" Nolon said in a harsh voice, "the idea of successfully conquering Earth sounds a little far-fetched."

Slim's eyes darted upward at the flame over his head, and a slow grin cornered his mouth. The men of Nolon's crew understood that his words had been meant for them.

"Let the sacrifice proceed." Larus waved an arm at the waiting spider men and one of them approached the glass case eagerly. Larus spoke in the language of his people, seemingly reciting some sort of prayer to their God. The chant spread through the crowd quickly. The spider man by the case stood ready. Sylvia Franklin's body went stiff and frightened. She crouched away from the trap door, her smooth, bronze back where it would catch the first spiders as they dropped on her

helpless form.

A skinny, hairless arm searched eagerly for the release of the trap door. Nolon jerked away with all his weight and almost fell as he dashed toward Larus.

At the same time he shouted at the top of his voice,

"We'll fight fire with fire."

Slim Jarvis whipped an arm upward and snatched the big torch over his head. His arm shot straight out and the fire ball sang loudly as it shot across the cave. The spider man at the sacrifice case went hurtling backward, the torch in his chest. A high-pitched scream of fear and pain cut from his beak-like mouth. There was the stench of burning hair as his body burst into flame.

THE cave was a madhouse. Nolon's men grasped torches in both hands and waded in. With Sylvia safe for the moment, Nolon crouched before Larus, waiting for him to move. For that one instant the spider leader was silent, eyes wide with what had happened. Then, swiftly as a crawling snake, he slipped from the chair. His body went low and he caught Nolon around the neck, his scrawny fingers closing about the Earthman's throat. Nolon fell backward, tripped over a rock and they rolled over and over in the mass of burning spider men that already carpeted the floor.

Nolon came up on top, and his muscular arms pushed Larus down until the finger hold was broken. Nolon tried to avoid the two great claw lips that were seeking a hold on his body. He lifted one fist and sent it flying into the ugly black face. It came away red with blood. He sent it crashing down again, but Larus twisted quickly, avoiding the full blow. With a terrific push the spider leader sent him flying to one

side, and Nolon felt the jaws close tightly on his bare shoulder.

Blood spurted from the Earthman's arm and it hung helpless at his side. With superhuman effort he tore himself away, pivoted and sent a handful of knuckles tearing into the spider man's midsection. As the man Larus crumpled forward, Nolon caught him full on the jaws with a twisting uppercut. Larus went flying back, his neck hanging on one side. He died before he hit the floor and thick, dark blood oozed from his opened jaws.

Nolon swung around, found another spider man bearing down upon him with upraised club.

"Bob!" It was Slim's shout.

Nolon turned and caught a fire torch as it came through the air from the slim one's hand. He poked it full into the spider man's chest. The room was beginning to clear.

The army of Larus, spider leader, was gone. Realizing their leader was dead, they fled down the tunnel shaft as though the devil himself were in pursuit.

Nolon shouted.

"Quick, Jarvis, down the tunnel. Make sure they don't get a chance to attack again. I'm getting Sylvia out."

The crew needed no orders. They were already out of sight, torches waving above their heads.

"Make it snappy, Bob." Slim's face was streaked with soot. "I'll hold the tunnel open for you. The girl's pretty well under."

Nolon was already at the side of the case. It was built with a single glass on the bottom. There was a door there where the girl had been forced into the thing. Air holes were covered as long as it remained on the ground.

Swiftly but carefully he turned the case over on its side and watched with relief as she pressed her face to the

air hole. He snatched up a cudgel of a burned-out torch and motioned her away from the glass. Bringing the club down gently, he cracked the glass and drew a section of it away. The stench of burning flesh within the chamber was unbearable. He took her in his arms and went swiftly down the tunnel.

HALFWAY toward the entrance, Nolon hesitated. His face lighted as Slim and the crew members came back toward him and the girl.

"Did they escape?" he called.

Slim's face was a mask of concern.

"Those we killed in the cave were only a small part of the group," he confessed. "Right now there are a thousand freighters full of fighting spider men, headed for Earth. Bob, we couldn't stop them without an entire attacking force."

"What about Earth's army?"

"Every able-bodied man is in that spider fight up to his neck. It would take a two-day warning to turn those cleanup squads back into their rightful places with the fighting forces. These devils will land without warning."

Nolon's face clouded with thought. Sylvia Franklin had recovered. He put her down gently, gave her his shirt to put about her slim body.

"Wait for me in the ship," he ordered. "Have the U4 ready for the fastest trip it has ever taken. I've got to pay a last visit to our friend Larus."

Before the girl could protest, he was running hurriedly back toward the shambles in the cave. At the spider case he stopped, picked up a club and sent it crashing into the section that held the killers. Quickly he steeled himself and drew out a handful of the hairy, crawling spiders. He opened his cigarette case and pushed several of them into it. He snapped the lid and

slipped it into his pocket.

With one last look at the crushed body of Larus, spider leader who tried to kill Earth's women, he turned with a shudder of hate and made his way to the U4.

THE freighter U4 swept away from Venus with all rocket tubes open wide. Nolon's mind worked coolly now, yet the plan there was so fantastic that even he doubted the sanity of it. They were within ten thousand miles of Earth before he took command of the control room.

"I *still* can't understand why they didn't steal the U4, when they took the other ships." Sylvia felt much better now. She took no chances, however, and had donned the space suit as soon as she came aboard.

"Simple," Slim said. "The chief made the U4 safe from any piracy. There isn't a man alive that knows how she really runs. All I know is that you pull a lever here and there. Nolon knows what happens at the other end of those levers, and it's just as well."

Nolon smiled.

"You talk like I was a mystery man," he said. "So I'm going to try and justify it. Cut your motors and drift. I'm going topside."

A murmur of protest swept through the cabin.

Slim's jaw dropped.

"We can't waste much time with those murdering sons of spider webs so close to Earth."

Nolon was already at the main hatch.

"And if we *don't* waste enough time to make my idea work, it can do absolutely no good to pursue them. What chance would the U4 have against a thousand ships?"

The ship drifted. Men waited with bated breath as Nolon went topside, a shining cigarette case in his hand. His

face was glowing with the expression of a man who hopes and prays that he has done the right thing, when he re-entered the cabin in five minutes. The group turned eagerly as he came in.

"All hatches closed!" he ordered curtly.

"Aye, sir!"

Nolon turned toward the members of the crew within the control cabin. His face was set and hard.

"You men have been with me for years," he said slowly. "There is only one way I know to stop this invasion. If we landed in New York you'd all fight like hell, *and you'd lose the battle.*"

"You win," Slim Jarvis admitted.

"We're sticking with you. What do we do?"

"Good," Nolon answered. "Set your course straight for Earth. Pick up the invading fleet, but *don't* get close to them. Stay away and tail them in to within five thousand miles. Then I'll take over.

Slim looked puzzled.

"Don't we get a chance to fight?"

Nolon bent forward, looking the thin one straight in the eye.

"You'll have the biggest fight you've ever tackled." His eyes were deep with the certainty that he was doing right. "The U4 is going to rout a fleet of a thousand ships."

FOR the next eight hours, the U4 plunged straight on its course. The men were fearing for Nolon's sanity, but they obeyed without question. The gravity gauge indicated they must be close to five thousand miles from the Earth. Darkness was close and black around the glistening ship, but with the aid of the night glass Slim Jarvis picked up the invading spider fleet. The rush of sound against the speeding deck of the U4 seemed to whisper of trouble

ahead. Slim turned from the plot map finally, and wiped his face with a tired arm.

"Take over, Bob. They're on the range now. Coming in over Europe in the shape of a large circle."

Nolon nodded.

"That's what I figured," he admitted. "The population is heaviest in that area. More harm has been done. They'll take the area that comprised all the ancient countries of Germany, Italy, England and the small fry. With the weapons they capture, an invasion of the Americas will follow *if we can't stop them before they get started.*"

"I wouldn't have wished this mess even on the old Hitlers and Mussos," Slim said dryly. "Your plan better be good."

Nolon took a hurried look through the night glass.

"We haven't time to waste," he said. "Jarvis, keep the U4 drifting on an even keel. Keep our nose on the spider fleet. Men, stand by for a fast dive if it's necessary. This might look like the end of the world until you get used to it."

His lips were a tight line of hope as he sprang to the control board. He jerked down the huge lever that controlled the super-light on topside. He prayed that the light would have enough power to do the trick.

"Good God," Slim Jarvis stuttered. "Look at Earth."

Sylvia Franklin shrank to Nolon's side, her eyes wide with fright.

"Bob—what . . . ?"

Nolon's hand was steady. He drew the light lever down as far as it would go. The ship's power plant set up a terrific din. Dynamos hummed and stuttered powerfully and the lights within the cabin dimmed and went out.

Spread out across the green and brown of Earth, a huge black spider

stretched its hairy legs and moved a few inches. A whisper of fright went through the cabin. Slim Jarvis, still holding the U4 on its course, let a grin slit his dry lips.

"I'll be damned," he said, and stared as though hypnotized at the beast that strode across the world's surface.

THE image was clear now. It covered countries as though they were nothing but outlines on a map-like circle of green and brown paper. Its great legs twisted and crawled back and forth slowly. It was like some terrible symbolic spirit of old Germany.

It wasn't the spider that Nolon watched with eager eyes. *The ships of the spider men were turning back.*

To those hairy, beak-faced men in the ships below them, this giant spider was the Spider God, whose return they dreaded worse than death itself. The great circular fleet of spider freighters broke wildly, gyrating and twisting away from their goal. The invading fleet had been routed completely. It organized itself to a degree and swept away from Earth wildly, seeking any place to be rid of the great God who had returned to haunt their first invasion of Earth.

A sigh escaped Bob Nolon's lips.

"The Spider God has returned," he said. "The image of a spider the size of my finger tip. A search light to throw its shadow against Earth and we've put the fear of *our* God into a million bloody savages."

No sound disturbed the cabin. The light went out slowly and the spider faded. The regular breathing of the girl at his side told Bob Nolon that he had proven himself worthy of her love.

"All motors on. Dive straight in and set a course for Long Island." He put an arm around her shoulder. "I don't think we'll have further trouble."

The STORY of

ROGER BACON, English philosopher, monk, and man of science, known to his successors as *doctor mirabilis*, was born near Ilchester in the county of Somerset, about 1214. He was born of a highly respected family and at a period of history when science, as the term is now understood, did not exist; but was represented among those who were eagerly—if somewhat blindly—groping for explanations of the mysteries of the universe under the name of alchemists and astrologers.

Through his great intellect he raised himself far above his age, made remarkable discoveries in several branches of science and contributed much to extend the then scanty knowledge of nature. The facts of his life must be gathered mainly from tradition and from references in various works. He was well educated at Oxford in the classics and later took his degree as doctor of theology at Paris. Returning then to England, he became a monk of the Order of the Franciscans, a religious society of the Roman Catholic church founded in 1209 by Saint Francis of Assisi.

To appraise properly the life and work of Bacon it is necessary to understand something of the principles of this Order, and of the objects for which it strove. In addition to the vows of poverty, chastity and obedience which its members took, its fundamental conception was that they should lead a life as completely comparable to that of Christ as existing circumstances would permit. A simple costume—that of a shepherd of the day—was adopted, the use of shoes and of horseback riding was prohibited, conversation with women absolutely forbidden, and complete fasting required on all Fridays from sunrise to sunset. They were to devote their lives to the service of their fellowmen in sickness and mental distress. The order grew very rapidly in number, and in extent of Europe covered by its branches, as evidenced by the fact that during the plague known as the *Black Death*, which ravaged that part of the world in the year between 1343 and 1351, no less than 124,000 Franciscans fell victim to it, in caring for the sick and the spiritual ministration to the dying.

As a voluntary member of such an organization, it can readily be seen that Bacon was a kindly man of a deeply religious temperament. At the same time he was gifted with an inquiring disposition; and after joining the Order he carried on active studies and experimental researches in alchemy and optics. He was so far advanced in his discoveries as not only to arouse the jealousy of his associates and to create doubts

as to his orthodoxy, but also to occasion his being accused of dealing in the art of black magic. Thus in 1257, when Bonaventura was General of the Order, Bacon was condemned to imprisonment for ten years in Paris, and deprived during that period not only of his books and instruments, but of writing material.

Upon the accession of Clement IV to the papacy, he expressed his wish to see Bacon's writings, but the Franciscans prevented this request. Bacon wrote to him, expressing his readiness to furnish him with whatever he desired, and Clement in reply repeated his request to see Bacon's works, despite the Franciscan prohibition. Bacon accordingly prepared his "*Opus Majus*." It was in the nature of a summation of all the conclusions reached up to that time in his studies and investigations in science, philosophy and religion. Shortly after its receipt, and before he had time to read it, Clement died. But the fact that he had desired to examine it, and to give the writer a hearing on its merits, secured Bacon's release from confinement and from open persecution until 1278, when he was again imprisoned under the sanction of the new pope, Nicholas III, for another ten years, but this time he was allowed to continue his investigations and studies, and to write of them. At the end of the term he was given his liberty, and returned to Oxford, England, about 1288 where, in 1292, he completed his book entitled "*Compendium Studii Theologiae*," and shortly thereafter—probably in 1294—he died.

Bacon, although a natural genius and a man far ahead of his time, could not rid himself of all the beliefs and errors of his time. He was a firm believer in astrology and the "philosopher's stone," that mythical compound for which the alchemists sought during the Dark Ages, which, when found, was expected not only to be capable of transmuting the base into the precious metals, but of acting as a "cure" for all of the diseases and miseries from which humanity suffered during that sad era of intellectual twilight.

Yet even with such drawbacks, and the cruel treatment he suffered from his fellow Franciscans, his brilliant imagination remained unclouded, and his optimistic temperament undiscouraged. He was the first among Europeans since the days of Grecian intellectual supremacy who held and taught that correct knowledge of nature could only be acquired by observation and study of its phenomena. He was particularly interested in optics, on which he shows new and ingenious views in his writings. He held advanced views

ROGER BACON

By NORMAN WHITE

on the refraction of light, on the apparent magnitude of objects, on the great increase in the size of the sun and moon in the horizon and gave a correct explanation of them. He is believed to have learned—through the reading of Arabian documents that had been translated into Latin—that with sulphur, saltpetre, and charcoal a substance could be produced that would imitate lightning and cause explosions—in other words, gunpowder. He is believed to have made and exploded some of it under circumstances that convinced the superstitious that he was a practitioner of Black Magic, and in league with the devil.

He studied several languages and wrote Latin with great elegance and clearness. Deserving of honorable mention are his discoveries of the errors that prevailed in the calendar of his time—which was about eight days behind accuracy. He prepared a rectified calendar in the year 1263, a copy of which is preserved in the Library of the University of Oxford. It was not until 1582, that this error, which by then had amounted to ten full days, was corrected by order of Pope Gregory XIII, under the guidance of Clausius, the official mathematician of the Vatican at the time.

The really outstanding manifestation of Bacon's scientific bent lies in that extraordinary foresight which led him to see the magnifying properties of convex lenses, the inherent power in gunpowder, and the possibility of flying machines and mechanically propelled boats, or of circumnavigating the globe. Perhaps, the best way to show how deeply impressed he was with the wonders of nature, and the possibilities of achievement by man when control of its forces was gained by knowledge of their laws, is to quote the following extract from one of his later manuscripts of prophetic writing:

"First, by the figurations of art, there may be made instruments of navigation without men to rowe them, as great ships to brooke the sea, with only one man to steere them, and they shall sayle far more swiftly than if they were full of men; also chariots that move with unspeakable force, without any living creature to stirre them. Likewise, an instrument may be made to fly withall, if one sit in the midst of the instrument, and doe turn an engine, by which the wings, being artificially composed, may beat the ayre after the manner of a flying bird. . . . But physicall figurations are far more strange; for by that may be framed perspects and looking glasses, that one thing shall appeare to be many, as one man shall appear to be a whole army, and one sunne and

He was the most amazing character in all history. More fiction than fact has been written about him!

one moone shall seem diverse. Also perspects may be so framed, that things farre off shall seem most nigh unto us."

Nevertheless, this same ability which shows itself in other spheres as a knack of correlating the sciences, of grasping the unity in history or of seizing upon the causes of human error, was Bacon's weak point as far as philosophy was concerned. United with his energetic but imperious temperament, it shows itself as a confidence in his own peculiar capacity to interpret Aristotle rightly, as a tendency to dismiss theories with which he disagrees and as an inability to consider calmly the implications and value of his own philosophical innovations. After proclaiming that the individual is the most real thing in the universe, he dismisses the problem of individuation as stupid.

Bacon's most valuable philosophical contributions are his adoption of the Augustinian theory of "rationes seminales," his analysis of the process of becoming, his rejection of the monistic doctrine of the numerical unity of matter in all things, his discussion as to whether generated forms appear instantaneously and as to what happens to the forms of elements which combine to produce mixtures, his belief in innate exemplars for a knowledge of all spiritual beings including God, the angels and our own soul, and his views on the similarity between the knowledge of the angels and that of separated souls, and the divine knowledge of creatures.

Because of his broad learning, and in disregard of the efforts of his brother monks to disparage his reputation, he was known to the general public of the day as "Doctor Admirabilis" and held by them in high esteem for his kindly and unassuming manners. All his manuscripts were written in the Latin language, in which he was very proficient. Six of these were published in the years between 1485 and 1614. In 1733 his "Opus Majus" was published, and in 1859 his "Opus Tertium," "Opus Minus" and "Compendium Philosophiae" together, under the title of "Opera Inedita."



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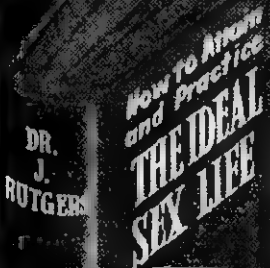
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HENRY W. LONGFELLOW APPARENTLY RECEIVED HIS INSPIRATION FOR **HIAWATHA** FROM THE EAGLE-TOTEM LEGEND OF THE **SENECAS**.



JOE C. SEWELL



THE DOUBLE EAGLE OF IMPERIAL RUSSIA, THE EAGLES OF GREECE AND ROME, THE WINGED HATS OF THE NORSE AND THE WINGED LIONS OF ASSYRIA, PROVE THE EAGLE A TRULY UNIVERSAL EMBLEM.

THE SIOUX and AZTEC INDIAN TRIBES WERE MEMBERS OF THE EAGLE-TOTEM. THEIR CHIEFS WERE DESIGNATED BY RESPLENDENT EAGLE-FEATHERED HEADDRESS.

Mysteries

TOTEM OF THE EAGLE

By L. TAYLOR HANSEN

Even today the eagle is a symbol used by the peoples of many lands; both sides in this war carry the eagle

WHEN one approaches the maze of ancient history at the place where it blends into legend, with the point of view that the sacred animals (totems) mentioned in early legends, were in reality great political powers, then certain facts which one has never particularly noted, or has taken for granted, without inquiring the reason, suddenly flash out like jewels in a half-lighted room. Such a fact is the extent of the eagle emblem.

From the double eagle of old Imperial Russia to that of ancient Greece and Rome, and from the winged hats of the Norse to the winged lions of Assyria, the eagle is curiously universal. However, the culture does present a pattern and that pattern is significant. Feather-culture is heavier upon the Atlantic and weaker upon the Pacific hemispheres.

Furthermore, though it is fairly strong among all of earth's "primitive" or ritual-clinging peoples, yet it reaches its culmination in the American Indian. While the Polish knights of early Europe wore a tiny row of eagle feathers streaming down their backs to indicate their totem, the Sioux and Aztec chiefs were resplendent in their diadems. Moreover, these diadems of the Amerinds have a strange resemblance to those of the Azilians who once invaded Europe through Spain at the close of the ice age.

And again, while the Greeks pictured their warriors and those of Troy with great crested helmets, the red warriors of the entire Atlantic seaboard from the Karibs to the Iroquois, were striking for the manner in which they shaved the sides of their heads and trained the top hair to rise in the bird-like crest, which gave their sharp features such a weird and sinister appearance for the white man.

It is an undeniable fact that feather-culture, which is more or less worldwide, is nowhere as varied, as intricate, or as novel in any land, past or present, as it was in the Americas. From feather-pictures to feather-ropes, and from mere body-decoration to the wall-pattern of entire rooms, such as are described by the Spanish explorers before the blight of their conquest had taken effect, the Americas were the continents

of feather-culture.

Yet even here, the cult of the Great Bird seems to have had its distribution. It is stronger upon the Atlantic. Therefore, we are forced to choose one of three conclusions: 1) the totem entered the Americas from the Atlantic; 2) it entered from the Pacific, and was then driven to the Atlantic by subsequent invasions of an alien culture; 3) it originated in the Americas and swept out in concentric waves from this center.

In considering the first of these possibilities, we find that in many ways, despite the difference in present racial type, the two sides of the Atlantic have many culture-traits in common. In the name "Pan," in the legends of the "Twins," of "Saturn," of the dragon and sacred-plant connection, as well as other tales, we find this persistent unity. Nor could they have been casually carried to the Americas because, in almost all cases, these units of the Atlantic-complex are more varied and deeply entrenched in the western side of that ocean.

NOR does this similarity end with legends. We find in the Americas a series of purely cultural-traits among the Indians which ethnologists have hitherto considered as typical of the Aryan-speaking nations of Europe.* Perhaps it

**The languages of the world may be roughly divided into the inflectional and agglutinating. Of the former are the great divisions of the Aryan (European from Russia to Spain and Norway to Armenia), and the Semitic which is best exemplified by the Arabian. Philologists have discovered that Aryan is a family of more or less related languages—thus mother becomes mutter (German), mater (Latin), mere (French), metera (Greek), etc. or night becomes nacht (German), nicht (Gaelic), nichta (Greek) etc. The agglutinating, on the other hand, makes its sentences by combining many small root words into very long and often unwieldy words. For example, the Apache Indian mother says: "I-walk-with-child-on-back, yesterday."*

(Basque, Finnish and Hungarian are agglutinating.)

would be well for the clarification of the subject if we were to rapidly review the traits which have always marked these conquerors of early Europe.

Hero-stories such as *Beowulf**, picture the life of these lusty warriors of Europe and the Mediterranean (during 2nd millennium B.C.) with vivid clarity. We see the great baronial hall where the heroes gathered to drink, chat and brawl. We hear the heavy rafters ring with their drinking songs and with the hero-stories which the minstrel chanted to the accompaniment of the lyre. These tales which were called Eddas by the Norse, were known as Vedas by the Aryan-speaking conquerors of India.

It has been suggested by architect students that the lines of the classical Greek temples, which have been such a joy to beauty-lovers throughout the ages, were but adapted to stone from these old baronial halls which the Aryan tribes constructed of whole logs. Thus the columns were originally vertical logs driven into the earth to support the arch of the long slanting roof whose peak ran the rectangular length of the building.

The political divisions of the Aryan-speaking peoples was upon tribal lines, and those lines were originally family divisions. The social system was patriarchal, or in other words, the descent was traced through the father. The calendar was computed by the lunar months and therefore twelve became the sacred number. The main weapon was the heavy iron sword (which replaced the earlier use of bronze) for offense, while the circular shield and the helmet were the weapons of defense. The horse had been domesticated at the very earliest appearance of these peoples upon the stage of history, and it was the main cause of their wide conquests during the second millennium B.C.

Other culture-traits were the cremation of the dead, showing a strain of fire-worship and perhaps, island-influence. The totem animals were evidently the octopus and the eagle, although some old Norse wood-carvings show chained lions being led to battle**. Designs were curvilinear and the circle was extremely prominent.

NOW these culture-traits of the Aryan-speaking conquerors have been compared to the Asians, the Mediterraneans, the Semitic-speaking peoples and even to the South Seas, but never, as far as I am aware, to the Americas. Yet, when we consider the tribes of the eastern seaboard where the Eagle-Totem is the strongest, some of the similarities are thought-provoking.

For example, let us take the great "malokas" of the Moskito Coast, of Brazil and the Caribbean. This house is a great rectangular struc-

ture, often over a hundred feet to a side, in which the trunks of entire trees have been used to support the arch of the long, slanting roof whose peak runs the length of the building. It is interesting to note that by freely translating the name "maloka," and using the Latin "loci" from which we have obtained "location," "local," "locality" etc., we would have for this name—"my place."

Nor does the similarity end with the communal building itself, ostensibly belonging to the chief, or the baron, as the case may be. In this building, we find that great festivals are given upon certain calendrical dates, and for which, special beer is prepared weeks in advance. (In the Matto Grosso this drink is brewed from a native pineapple, and the Indians there are amazed to see a white man eat pineapples raw.)

At these feasts, two clowns hand out the drinks and keep everyone amused. (It is to be supposed that since the court jester or jesters was an institution of the Aryan-speaking medieval kingdoms, the office may have had its origins early in the history of these tribes.) In the Americas, the strength of these jesters from the Pueblos to Brazil should certainly be a subject for future investigation.

Nor is the office of minstrel entirely neglected. The various tribes of the Atlantic seaboard, but particularly of the United States, formerly had epic stories or hero-tales. Some of these were in verse. Furthermore, it is obvious to most observers that many present Indian legends have a certain literary form, since if the narrator does not repeat the words correctly, the audience will immediately prompt him.

Apparently Hiawatha was such an epic, which Longfellow rearranged and lifted from its natural Seneca setting, in order to transplant it to the Great Lakes. The reason for this transfer is obvious when we remember that Longfellow leaned very heavily for his Indian words upon Bishop Barraga's dictionary of the Chippewa* language. (An Indian collaborator would have been better since some words are wrongly accented such as Nok'omis (my grandmother) which should have been NO-KO-MEES'. Gitche Gume should have been Keetchee Gawmi.)

It is also interesting to note that the Indians chose orators (lawyers) to plead their case before the judge who settled internal disputes. This may have been an institution of the Aryan-speaking tribes, but until we know more about Pelasgian and Egyptian law which Plato suggests might have had a common origin, it is equally probable that it was adopted from the conquered civilization by the later Greeks and Romans.

PERHAPS it would be easier to compare the points upon which the "Peoples of the Eagle"

* *Beowulf*—an early English Epic—author unknown.—Ed.

** Oslo Museum designs.—Ed.

* Chippewa is the spelling preferred by the tribe to the older "Ojibway" which was used by Longfellow.—Ed.

upon the eastern shore of the Atlantic differ from those of the western shore. They are: 1) the domestication of the horse; 2) use of the iron sword; 3) cremation vs. exposure and secondary burial; 4) the use of the octopus symbol; 5) type of design (curvilinear vs. angular); 6) tracing of descent. If these, then, are the exclusive Aryan features, and the others were borrowed from the conquered European population, this complex should be traceable to other parts of the world.

Curiously enough, it is. The Uighurs of Upper Mongolia, the people of the "Beaker" pottery who once traded from the Danube to England, Crete of the historical dawn (5000-2000 B.C.) and the South Seas seems to present a strange trail of the octopus symbol which culminates in the pre-Inca, South American city of Chan-Chan. On this trail, the octopus has sometimes been confused with the Crab or Spider, and the horse and sword are missing, but the helmet is retained, the knowledge of bronze (as well as other minerals, exclusive of iron), the patrilinear society, the clan arrangement, the circle and curvilinear designs, the lunar calendar and, judging from the number of red-haired individuals found in the graves, even the white-skinned racial type seems to have been retained.

Were these an early wave of our Aryan-speaking forebears? If this is true, their entrance was through the South Seas and their influence was upon the Pacific realm, and not the Atlantic side of the Americas. Indeed, instead of carrying the cult of the Great Bird which they did in part, the evidence seems to suggest that they drove the existing Eagle and Serpent totems with their matrilinear systems and sun-calendars, toward the Atlantic and into the mountains, as well as into the fringes of the continents.

Nor can we admit that these round-headed light-skinned peoples of Chan-Chan for whom the great Eagle was of secondary importance, imposed the cult upon the tall, disharmonic racial type in which it was centered. A culture does not pass from a weaker realm to a stronger. And for this same reason, we cannot allow its passage from a relatively weaker Europe to the American center.

HOWEVER, to back up this contention, there is an undeniable racial argument. The very essence of totemism is race. The symbol goes deeper than a flag. Yet it is entirely probable that the original bearers of the Spider or Octopus totem were bearded. Although in Chan-Chan, their portraits of themselves are beardless, yet so are those of the Ancient Greeks and Romans. In each of these cases it may have been that finding themselves the conquerors of a beardless people, and not wishing to be considered repulsive, the younger men found it expedient to shave—leaving to the older and more courageous minds

such as Socrates, the privilege of flaunting the full beard which is the badge of the white man.

Thus, it is obvious that the bearded Norse did not carry feather-culture to the focal point of the Great Bird cult—to the Atlantic tribes with the exposure-burial and crest hair-dress, merely because these Amerinds are the most beardless race on earth. The full-blooded Iroquois has the smooth cheeks of a woman, and the sign of facial hair is the certain indication of white blood. In fact, so repulsive to them was facial hair, (all peoples tend to make their characteristics into badges of aristocracy), that all three of these widely-separated Atlantic tribes—the Iroquois, the Aruaks and kindred tribes of the Caribbean, as well as the Aruakians of the Argentine, even plucked out their eyebrows.

Therefore, for not only cultural but for racial reasons, it is far more probable that the spread of the Eagle totem was from America to Europe, than from Europe to America. And for these same reasons, although the round-headed harmonics who carried the symbol in along with the Octopus or Spider, from the South Pacific, brought a sort of secondary cult of the Great Bird, yet that cult was weak compared to what they found. Nor can it be argued that a form of exposure-burial is practiced in Asia and the cult swept into America across the Aleutian Islands. Once more, feather-culture is weak in Asia. Furthermore, if the passage was from Asia to America, we would expect to find Asia the center, or focal point. This is not true. Therefore it is more than probable that the cult flowed from the disharmonic Amerind to the Asian harmonic, although, undoubtedly, much interexchange of culture has ebbed and flowed through the ages across the Alaskan land-bridge. Is it possible that the first wave was from America to Asia, although all subsequent waves reversed the direction?

FOR a moment let us study these Atlantic tribes of the Eagle. Besides the crest hair-dress, the cult of eagle-feathers and the strange sun-dance about a pole (probably originally a flying dance of some kind), we have that custom of exposure-burial—or giving the dead to the sun and birds. Now in a few tribes this is followed all the way through to secondary burial, just as Cro-Magnon Man of interglacial Europe buried his dead, from twenty-five thousand to two-hundred thousand years ago. True, like the complicated sun-dance, some tribes have lost part of the ritual, and others have lost others, yet the tribes which retain the intricate whole are all Atlantic peoples, or those who have access to Atlantic waterways, such as the Choctaws of the Mississippi, the Guami and Bribri of Central America and the Aruakians as well as others in the Southeast Andes.

Is this just a coincidence, or is it the secret of the entire distribution of feather-culture? Is

(Concluded on page 237)

the totem of the Eagle the totem of the tall disharmonic warrior-race who overran not only Europe, but possibly also Asia and Africa, as he followed the herds of the buffalo, during that first long, interglacial? And did this early ancestor of modern Europe well out of an American homeland, crossing a now submerged Ice-land bridge, to stamp his hatchet-features upon many a European grandson which a subsequent deluge of other blood has not entirely destroyed, although it has drained the color from his skin and hair?

If this theory be true, then indeed we can understand the strange fact, that although this high-cheek-boned Indian-looking cave-man ancestor has long disappeared from Europe, along with

the buffalo which he once hunted, and painted upon his cavern walls, yet today, over that same ground, men of a paler skin are fighting each other in a bloody war, in which both sides carry the same emblem—THE TOTEM OF THE EAGLE.

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GERMAN

WAR SECRET

DISCOVERED

AS WE all know, much of Germany's success in the present war is due to the skill of her scientists who have invented and perfected many implements of war without which Mr. Schickelgruber would never have had the audacity to even attempt to conquer the world. Movies and stories all tell of Germany's mighty planes and tank corps, but one weapon that is seldom mentioned, but was feared by the allies was the highly efficient anti-tank gun that played havoc within the British tank corps during the African campaign.

But this secret weapon is now an open book to the allies for many of the guns were captured in perfect condition together with their special type ammunition in Libya.

According to reports that have been issued since the guns were captured, the Germans had simply used the commonly known fact that velocity aids the penetrating force of a moving body. They have adapted this principle to produce several different guns that had shells with sufficient velocity to bore right through tank armor. Their most dangerous gun is the 88 millimeter piece that can be used either to fight tanks or aircraft. In all appearances it closely resembles a huge naval gun and it can put a hole in three inches of armor with the ease of a hot knife going through butter. However, it has one defect of being very big and heavy which affects its maneuverability and thus it is easier for the enemy to "knock it out." To compromise on a gun that would be effective yet easy to handle, the German war scientists developed the 50 millimeter gun. The whole power of the gun does not lie in the high velocity it gives its shells but much of its effectiveness is due

to the type of shells it uses. According to one of the officers who examined the gun and its shells, the shells can be best described as using the trick of driving a needle through a penny by first pushing the needle through a cork so that it can't bend or break. Thus the entire shell weighs almost four and a half pounds, while the part that does all the boring into the armor is about the size of a man's thumb. In place of the long steel projectile found on regular shells, these anti-tank shells have only a long, thin, sharp point jutting out from the center of the casing, with a square shoulder around the base to give it necessary balance.

The shell does its dirty work in three steps. First of all the needle point comes into contact with the surface of the tank's armor and thus all the force of the impact is centered on one spot with the result that the surface is cracked. Next the cylinder of soft metal that surrounds the bullet compresses all about the point and this prevents the shot from slithering off the tank. Lastly the shot that does the boring rushes through the soft metal and hits the armor plate at the instant that the needle point is placing the greatest possible strain on the plate. Once the shot gets inside the tank, it moves about like a drunken driver, ricocheting from one surface to another, and leaving death and destruction in its wake.

Many observers of this gun in action regard this piece of booty to be as important as any yet captured by the allies and soon this gun or at least its principles will be fighting on the side of the allies to bring victory more quickly for our side.

—T. Borr.

DISCUSSIONS



AMAZING STORIES will publish in each issue a selection of letters from readers. Everybody is welcome to contribute. Bouquets and brickbats will have an equal chance. Inter-reader correspondence and controversy will be encouraged through this department. Get in with the gang and have your say.

AN OLD MANUSCRIPT OF BURROUGHS?

Sirs:

If the credit line did not say Howard Browne wrote "Warrior of the Dawn," I would think it was an old Burroughs' manuscript that he, Burroughs, had finally decided to finish and present. If Browne can do as well without Burroughs as a model, you have a really great writer.

The only other writer that had an outstanding story was Clark South and his "Time Mirror," although I believe I have read almost the same story in some other magazine.

EARL HOMER NEWTON, JR.,
2001 Whitis,
Austin, Texas.

Actually, Browne's story was patterned upon the flawless style of Edgar Rice Burroughs. According to his own explanation, it was an attempt to tell a story in the traditional method of presentation that characterized the earlier "Tarzan" yarns. And Browne is first to admit that, in this story, he fell far behind that goal. Which, we must admit, is carrying modesty a little too far! —Ed.

AN ORCHID FOR BINDER

Sirs:

I have been a steady reader of yours for over six years, but this is my first letter. The reason for this letter is "After An Age" by Binder. It was by far the most thrilling and complete story since "Darkness And Dawn." I hope you will continue such stories forever.

CHESTER POWELL,
Portland, Ore.

DECEMBER COVER BEST EVER

Sirs:

J. Allen St. John's cover painting for December AMAZING STORIES was one of the best ever to grace a science-fiction or fantasy magazine or book. This was one of the most realistic primordial scenes which I have ever seen. He really makes the human figure display its most alluring charms in a spectacular manner.

James B. Settles seems to have no comparison in as much as Airships and scenes of other worlds are concerned. I should like to see a front cover painting by him illustrating a space-ship battle in the deeps of space.

Each and every interior illustration this month, with the exception of Jay Jackson and Malcolm Smith's drawings were exceptionally fine. The exempted artists do especially good work with charcoal, I think.

All of this issue's stories were very superbly written.

Dwight V. Swain gave me a few bad moments when Henry Horn in the beginning of the story referred to the blonde girl nudist's cute . . . well, you read the story!

Incidentally, drop Eando Binder a hint that some more stories about Adam Link, Invisible Robin Hood, and Kirk, the Wanderer of Little Land, would be welcomed by a lot of readers.

As for suggestions about reprints, how about the Skylark series; the Professor Jameson series; and the John Carter of Mars, Carson of Venus, and David Innes of Pellucidar series which were printed in book form.

Even though Magarian doesn't paint in color I should think she would learn in order to put some of her swell ideas on covers.

How about Finlay or Paul doing some of your front cover paintings?

JACK FORTADO,
Box 314,
Rodeo, Calif.

DECEMBER ANALYSIS

Sirs:

It has been about three years since I first began to read your magazine, and I can truthfully say that I enjoyed it most of the time. True, there were times when I thought that some of the offerings were simply lousy, but then when a mag keeps up such high standards, as yours does, it is rather difficult to weed out those stories which are not up to par. I have no reference to make to any particular one, but I've noticed that my own opinions were voiced in letters which other readers had contributed to the Discussions column.

Finally, I decided that I should scratch off this to let you know my opinion on the current issue.

To take them in order of publication (but I didn't read them in this way) I will say:

1. Warrior of the Dawn—Excellent! written; was quite surprised to find that there were more than one tribe of Cro-Magnards living so near another.

2. World of a Thousand Moons—Average lot

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of adventure with a bunch of rich kids thrown in.

3. One-Way Ticket to Nowhere—Very interesting in that it showed possible development in railroad travel on monorails.

4. The Time Mirror—Superbly presented. Magarian's illustration was very good also. (I read this first.)

5. Planet of the Gods—Surprise ending. Interesting theory proffered in this. Gives room for thought.

6. The Sphere of Sleep—Rather complicated in the description of the column of green gas, but the ending was good.

7. Henry Horn's X-Ray Eye Glasses—Amusing, but like all other H. H. stories.

8. Monsoons of Death—Passable. It presents an entirely different version of Martian inhabitants. Now for the Features.

1. I always find something interesting in the Observatory.

2. The fill-ins (my own name for them) are very good.

3. Vignettes of Famous Scientists is something you should keep.

4. Scientific Mysteries is especially good this issue, and seems to tie in with the lead story, "Warrior of the Dawn."

5. Discussions is, of course, the stamping ground for the present day Piltdown and Cro-Magnards, in one continuous battle with ye ed.

6. Meet the Author is something I like to do. Gives one an idea of the type of man who writes their scientification.

Illustrations:

Front cover is very good. I like St. John very much.

Back cover was good, but the inhabitants of Ganymede couldn't be seen clearly.

Fuqua's pics for Monsoons and One-Way Ticket were not up to par.

Hadley's Spacesuits for Sphere and his Vestans in World were very well done.

Jackson's Gods in his pic were very nicely drawn.

DONALD F. NESLINE,
16 Todd Place, N.E.,
Washington, D. C.

Thanks, Donald; you certainly didn't leave anything out! And we'll do our best to keep the ratio of bad stories low as compared to the good ones. When one not so good sneaks in, we hear about it. And how!—Ed.

BEST STORIES OF 1942

Sirs:

I have in front of me 12 copies of AMAZING STORIES dated January to December inclusive.

Your best cover was for the November issue illustrating After An Age.

Your twelve best stories for 1942 were as follows:

January: The Test Tube Girl (Patton).

February: Return to Pelliceder (Burroughs).

March: Disciples of Destiny (Wilcox).

April: Secret of Lucky Logan (Bond). (Wilcox disappointed me this issue, so did Adam Link.)

May: *Martian Miniature*. (A lot of fans won't agree with me on this pick).

June: *Time Will Tell* (Petaja). (Bond's serial is too much on the same line as *Sons of the Deluge*.)

July: *Return of Hawk Carse* (Gilmore). (More of the Hawk.)

August: *Vengeance of Martin Brand* (Irwin).

September: *Love of Lanse Briggs* (Bond). (Incidentally, this issue was the worst of the year, cover, stories, etc.)

October: *The Hollow Planet* (Wilcox).

November: *The Eternal Wall* (Gallun). (Binder at his worst.)

December: *Planet of the Gods* (Williams). (Cover pretty good.)

Although the stories this year weren't as good as 1941, they were fair. In the coming year I'd like to see Finley, Bond, Adam Link, Hawk Carse, no Settles, Patton, and less interplanetary stories.

SYLVESTER GORNOFSKY,
270 Lombard St.,
Pittsburgh, Pa.

We agree that your selections were among the year's best. Patton is at work on a short novel called "The Dream Stealers" which promises to be one of the finest he's ever done. And that's saying plenty! Burroughs is in the midst of a new John Carter series, the first of which is in this issue. Bond, Williams, Wilcox, et al will be well represented during 1943. And Irwin's "Martin Brand" doesn't appear satisfied with his death sentence!—Ed.

LESSER COMES ACROSS

Sirs:

My newest policy (I sure accumulate plenty of 'em), is to write a note to every ish of every mag I buy; provided I have the time. Right now, I have the time—and paper—and thoughts—and, most amazing—I have the typewriter!

To Nelson S. Bond, that consistent author of most mags—you, sir, have entered a new list as far as I'm concerned. After I concluded reading *When Freeman Shall Stand*, I placed you, without a doubt, among those cherished few, the immortals.

By the way, the other present writing immortals are: Eando Binder, for *Five Steps to Tomorrow* and *Vassals of the Master World*; Don Wilcox, for *The Eagle Man*, *The Voyage That Lasted Six Hundred Years*, *Battering Rams of Space* and *The Lost Race Comes Back*; Ed (world-wrecker) Hamilton, for the majority of the *Cap Future*, yarns, particularly *The Lost World of Time*, *Quest Beyond the Stars* and *Planets in Peril*.

Bond, I repeat, is the fourth member of the group, due to *When Free Men Shall Stand*."

And that is that!

To dear, fine Otto Binder—I hate to say this, but, here goes. This is the first time in my long history as a criticizer, that I have to complain about one of your novels. *After An Age* was not so hot! It could have been much, much, much better. Sort of childish, I guess. Definitely.

To RAP—thanx a million for purchasing

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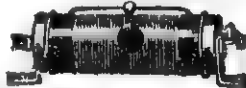
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To the eds, writers, artists, etc., of the latest ish—you've done a pretty good job, boys. Howie Browne: you've a nice style; however, stiffness, from unaccustomedness to the field, I guess, should be prevented. To Williams: Sir, everything was fine until the explanations. What, no villain? To Geier: nice writing, newcomer—maybe someday you'll be able to say that to me. Who knows?

Where are Finlay and Paul interiors? Soon, oh, so very soon: Let Paul do the pics for Bond's new novel which should squeeze itself into publication in no more'n a couple of months!

Old classic novels are fine. Sure the *New Adam*! I never did buy the book. How about some old Smith tales? *Skylark of Valeron*, of *Space*, etc., or even, if possible, *The Grey Lensman*.

That's all for now.

MILT LESSER,
the Happy Genius,
2302 Ave O,
Brooklyn, N. Y.

Which covers just about everything of importance! A pat on the back here, and a rap across the knuckles there. And, brother, we like it!—Ed.

MR. LEY ANSWERS

Sirs:

I just found Mr. Holman's letter in the current issue of *AMAZING*. After reading the letter I re-read my article on Jupiter, then I read the letter again and once more. But even now I fail to see what I did that angers Mr. Holman to such an extent. The only glaring sin I can find is that I did not state whether I placed my hypothetical spring balance on the equator or on one of the poles. I thought it was understood that the figure I gave is the mean or average weight.

Unfortunately I cannot satisfy Mr. Holman's curiosity as to the difference between equator and pole, to calculate those figures we would have to know first where the surface is. However, we don't know that; our ideas as to the depth of Jupiter's atmosphere are terribly uncertain.

I enclose a sketch of the conception of Rupert Wildt of Princeton University. According to this conception the layer of methane and ammonia (which is what we see in the telescope) is just the thin outer "shell" of the atmosphere which consists mainly of hydrogen and which has a depth amounting to 18 per cent of the radius of the planet. To avoid further reproaches I hasten to state that this is again "mean," assuming the planet to be spherical.

Underneath that hydrogen atmosphere Rupert Wildt assumes an ice layer filling 39 per cent of the radius. The enormous pressure makes that ice assume the almost incredible average density of 1.5 (the hydrogen is assumed to have a mean density of 0.35). The core of the planet, 43 per cent of the radius, is assumed to have a mean density of 6.0 and to consist mainly of iron in the center with a rocky shell around it.

This model fulfills the demands of overall

density, gravitational influence, etc. and does not contradict observed facts, but that is about all that can be said about it. Like all others it fails to explain the Red Spot and the various other observed "disturbances."—

Outer cloud layer, Methane and Ammonia



The composition of Jupiter according to Rupert Wildt of Princeton University

I said that I meant CH₄ in my article, and although I lack Mr. Holman's experiences I insist that it is not good to breathe. Low concentrations for fairly short periods are possibly not harmful . . . but that applies only for low concentrations and fairly short periods.

It seems to me that Mr. Holman was enthused by the idea of ammonia seas and ammonia rains, but that theory is not tenable anymore. The ammonia clouds seem to be a top-of-the-stratosphere-phenomenon which does not extend downwards. At the present moment nobody can even guess how the surface of Jupiter actually looks, but the ammonia oceans won't be there, not for reasons of temperature and pressure but because there isn't enough ammonia.

Willy Ley,
415 West 24th Street,
New York, N. Y.

Thank you, Mr. Ley, for answering Mr. Holman.—Ed.

"CONGRATULATE MR. BROWNE"

Sirs:

I am a comparatively new fan of AMAZING STORIES and FANTASTIC ADVENTURES, though ever since I first discovered it, about a year ago, I have been buying every issue I can get my hands on.

I just about three minutes ago finished reading the January issue of AMAZING STORIES, and had to sit right down and write my first fan letter.

The stories in it were excellent, especially "The Lost Warship" and "Larson's Luck." And the



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ending to "Warrior of the Dawn" was marvelous. Please congratulate Mr. Browne for me.

Inclosed find fifteen cents for the print of the illustration for "Queen of the Flaming Diamond," which incidentally was another superb story.

Judy Walker,
Route 12, Box 1160,
Houston, Texas.

Welcome to our family of readers, Judy. We are glad you liked the stories, and that you liked the illustration. This month's illustration offered at the same price, 15c, is on page 77 of this issue, one of the finest Virgil Finlay has ever done. And on enameled stock, it stands as a work of art—Ed.

NO PRIORITY!

Sirs:

The only reason that I'm writing is that the Discussion page amazed me so much; the amount of fanmail printed got under my skin. What is happening to the column? Is there a priority or what?

Where in seven moons is—"Bring Back My Body," by O'Brien? I'm going buggy trying to find the missing story. Read everything from the stories to the ads. Don't tell me it's a mystery.

Howard Browne, the author of "Warrior of the Dawn," tops all stories written this year in AMAZING STORIES. It was so finely written that it held me in suspense to the last word. I recommend that Mr. Browne should write a sequel to "Warrior of the Dawn."

The stories that appeared in the January issue of AMAZING STORIES are rated as follows:

1. Warrior of the Dawn,
 2. Queen of the Flaming Diamond,
 3. The Lost Warship,
 4. The Chameleon Man,
- and the others as the contents classified them accordingly.

The editor of this mag should make reproduction of the back cover suitable for framing. I could almost assume that the majority of fans cut out the back cover and if it was reproduced it could be used as a decorative means.

Now that I got that off my chest I feel 90% o.k.

PVT. WILLIAM SADOWNICK, JR.,
A. A. Board Det.,
Camp Davis, N. C.

"Bring Back My Body" is in this issue—we hope! And we also hope the Discussions column is satisfactory this time, too! As for the back cover, reproductions suitable for framing would be exactly the same as they appear on the magazine, since the type is an integral part of the plate. We regret that your suggestion is something we are mechanically unable to follow.—Ed.

"PRAISE-CRITICISM"

Sirs:

This shall be a letter of praise and criticism, likes and dislikes, comments and requests, from an old and avid, if not oft-writing, fan. . . .

Praise: "Warrior of the Dawn," which was really superb. Browne's style of writing is descriptive in the sort of way that makes the story

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impossible to drop once started. St. John's paintings in the last two issues are ones that make you stare; he was at his best.

Criticism: Somehow, I do not like the idea of reprints—unless you keep a policy of printing stories which have not previously been in magazine form, such as "The New Adam," and unless you do not have a reprint every issue. As outlined, your apparent plans in this regard are swell, but if once a magazine gets started on the reprint idea, it usually does not take long before every issue has one. If that keeps up it will be only a short while before stories which all fans have read will be reprinted. This is undesirable to me because it takes up space in the magazine that could be filled up by some good new author like Clee Garson, Leroy Yerxa, or Dwight Swain. All the really old fans have probably read all the reprints anyway, and they, even though a minority perhaps, deserve some consideration.

Likes: Covers by McCauley, St. John, Smith, and Jones; long serials, especially like those by Burroughs, Browne, and Wilcox; the little articles throughout the magazine; cartoons; and interior illustrations by Magarian. I wonder how the latter would be on a cover. . . .

Dislikes: Too many short stories and not enough long ones. It would be swell if you could have a continuous run of serials, with a new one beginning the month after another ended. Or else a Burroughs story in between, and the longer his are the better. "The Lost Warship" is an example of a good story that could have been a classic if it had only been longer.

Comments: I think the new idea of making reproductions available is the most important step taken in the field of sf literature in a long time. Enclosed, incidentally, is fifteen cents to cover the cost of a reproduction of Finlay's illustration in the January issue for "Queen of the Flaming Diamond"—a swell story, by the way. Please keep this up. Two reproductions a month would be excellent—one of the cover (always the cover) and at least one of the best interior illustrations. The cover reproduction in color if possible.

I, for one, will definitely miss Dwight V. Swain. If, as you implied, he is now in the armed forces, AMAZING has lost one of its best new writers. Although Uncle Sam probably needs Mr. Swain's services more than we, AMAZING is going to have a hard time satisfying readers when filling up space formerly occupied by that writer's swell stories.

H. W. McCauley—and I don't give a damn what anybody says—is your best cover artist! I say this with venom, and firmly declare, along with thousands of others, that no cover can or will equal those of McCauley. There.

Requests: Sequels to "The Lost Warship," "Vengeance of Martin Brand," and, yes, "Warrior of the Dawn." Another cover by Jones like his November one. Another cover by Smith like his one on the October issue. They were both swell. More back covers by James Settles like the last



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one on the January issue, which was his best to date. A long story by Don Wilcox. And where's Eando Binder?

AMAZING's climb toward perfection in the past year has been slick, and I hope it stays the way it is now.

JON F. McLEOD,
1225 Willow Court,
Jacksonville, Fla.

We will not overdo the reprint idea—only classics that most of you, if not all, have not read. Watch future issues for some pleasant surprises. If you like long stories, don't miss the April issue. Bond's complete novel is its feature yarn. Reproductions will continue, the best, or rather, the most suited for framing will be designated,

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and this may run from one to three or four in an issue, if it happens that way. Covers we can't reproduce, except just as they appear on the magazine, with titles, etc. Tharn is coming back, and so is Martin Brand.—Ed.

BEST STORIES IN FOUR YEARS

Sirs:

Although I have been reading AMAZING STORIES for four years this month, this is my first letter to your mag. Some people may not agree with my point of view on how the stories rate, but here goes anyhow.

- 1—Test Tube Girl.
- 2—Rats in the Belfry.
- 3—Queen of the Flaming Diamond.
- 4—Sarker's Joke Box.
- 5—Larson's Luck.

Tell Paul that his drawings are getting better and better all the while. Keep up the good work, Paul. I enjoyed McGivern's "Chameleon Man," but "Mystery on Base Ten" is a little out of his line. Please tell Paul I liked him better in the paintings of different planets. His "Glass City of Europa" was a good one.

CALVIN STEINGOLD,
623 Manida Street,
The Bronx, New York.

Your selection of the five best stories is very interesting. We have received a surprising number of letters giving us such lists, and although opinions differ, many stories appear on almost all lists. Your number 1 story is an example.—Ed.

NOT ENOUGH SCIENCE

Sirs:

Having just finished the January issue of A. S., I am writing to criticize and comment. I've got one beef in particular, and that is: the stories in A. S. are too much adventure and not enough science. Of course I know that AMAZING STORIES does not specialize in stf. but just the same, some of the recent stories were pure (forgive me for saying so) hack. The art work is, and has been, good, and get more of Finlay's work by all means! As for reprints, what about including some of E. E. Smith's works in your reprint list? I also suggest H. G. Wells' "The Time Machine," "When Worlds Collide" by Balmer and Wylie, and its sequel "After Worlds Collide." Just keep up your present standards and I, for one, will be happy.

NEIL CRANDALL,
314 North 33 Street,
Omaha, Nebr.

We can't understand what you mean by not enough science? What about the stories in this issue for instance? "The Metal Monster," "The Light That Killed," "Victory from the Void" and so on? All crammed with science, plus some darn good action and plot and characters. We certainly do specialize in stf. Most of our stories are science fiction, and some come under the heading of "Amazing" which is fitting. Do you construe "gadgets" as science, or perhaps heavy theory gone into at great length?—Ed.

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SUBMARINE OF NEPTUNE

By Morris J. Steele

**The undersea vessel of this giant world is a marvel-ship
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(See back cover)**

ARTIST James B. Settles has given us his conception of the means of travel the inhabitants of Neptune might use on their giant world. In so doing, he has drawn on a number of facts we know about Neptune, and drawn upon his imagination and upon theoretical science and astronomy for a complete picture of the Neptunian water-craft.

The planet is known to be more than likely a liquid, or almost entirely so. Its mass is about eighteen times that of Earth, and its density, 0.20. It has, perhaps, an atmosphere of great density extending thousands of miles from the surface. Any land formations would probably be floating masses of crystalline substance, condensed by the low temperature, forming fantastic plains honeycombed by caverns, in which the partially amphibian Neptunians live.

The Neptunian is a lizard-like creature with suction cups on his under side, enabling him to crawl about on the slippery crystals of his cavern surfaces. He is naturally suited to living part of the time in water, and when he considers a mechanical means of travel, it is even more natural to assume that he would devise a vessel capable of traveling through the water.

Many problems would confront him; extreme pressure, probable swift currents, and a lack of any type of combustible fuel. Neptune probably never had any vegetation deposits which would have turned into coal or oil. There would be no such thing as gasoline. Explosives might be unknown also.

Let us picture the vessel he would build. It would be a submarine, streamlined to reduce all water resistance. Its size would be large, perhaps as much as two-hundred fifty feet long with a beam of ninety feet or more. The general shape would be that of a teardrop, with the only breaks in the contour being observation bulges, and diving and elevation surfaces.

Since this vessel would have to resist a pressure of many tons to the square inch, the Neptunian would use the toughest metal known to his world. He would laminate it in multiple sheets running alternately across the grain. The hull would be as much as six feet thick.

Port holes would be in six sections; each section made water-tight in itself. Selenium treated metal discs, perhaps four inches thick, would be transparent under the effect of electrical rays.

Thus, perfect vision would be attained with perfect safety.

Steering this submarine would be a combination of rudders and planes and the propulsion apparatus itself. In spite of its great weight, the vessel would be able to maneuver around in the water, either ascending or descending, with great facility, its very mass aiding in its operation in the very dense water.

The motive power of this submarine would be compressed air, shot from huge jets arranged in a concentric ring around the pointed tail of the ship. Thus, when turning, jets on one side could be turned off, and jets on the other speeded up, to spin the ship around with great swiftness, or to aid in turning the nose up or down in rising or descending. Instant and perfect control would result, since it is possible to control an air jet to a very fine degree of pressure graduation.

This compressed air would not be stored in the ship, but would be obtained and forced into the jet tanks by a swift process of electrolyzation from the sea water itself. The sea water of Neptune contains a high degree of hydrogen, and is in a very unstable condition compared to that of Earth, and is therefore easily broken down into its gaseous elements, which would expand enormously, producing great pressure.

Travel about the dark depths would be a hazardous undertaking, since at depths beyond the penetration of light, which is very little anyway because of Neptune's distance from the sun, absolute blackness would reign. Thus, before the Neptunian ventured to use his submarine, he would chart out definite routes of travel, and would provide them with beacons set at intervals. These beacons would be powerful lights whose shafts would pierce upward from the ocean floor of Neptune as much as a mile.

The speed of these ships would be as much as fifty miles per hour, and the distance that could be traveled would be unlimited by any fuel shortage since the compressed air motors would make their own fuel as they proceeded. Numerous vents in the ship, equipped with rotary wheels, would constantly charge up batteries by reason of the passage of water through these vents. This electrical energy would provide the basis for the electrolysis of the sea water for the compressed gases to run the ship.

THE END

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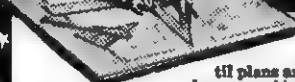
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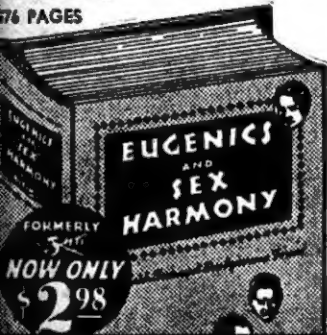
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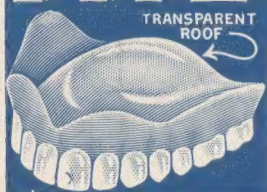
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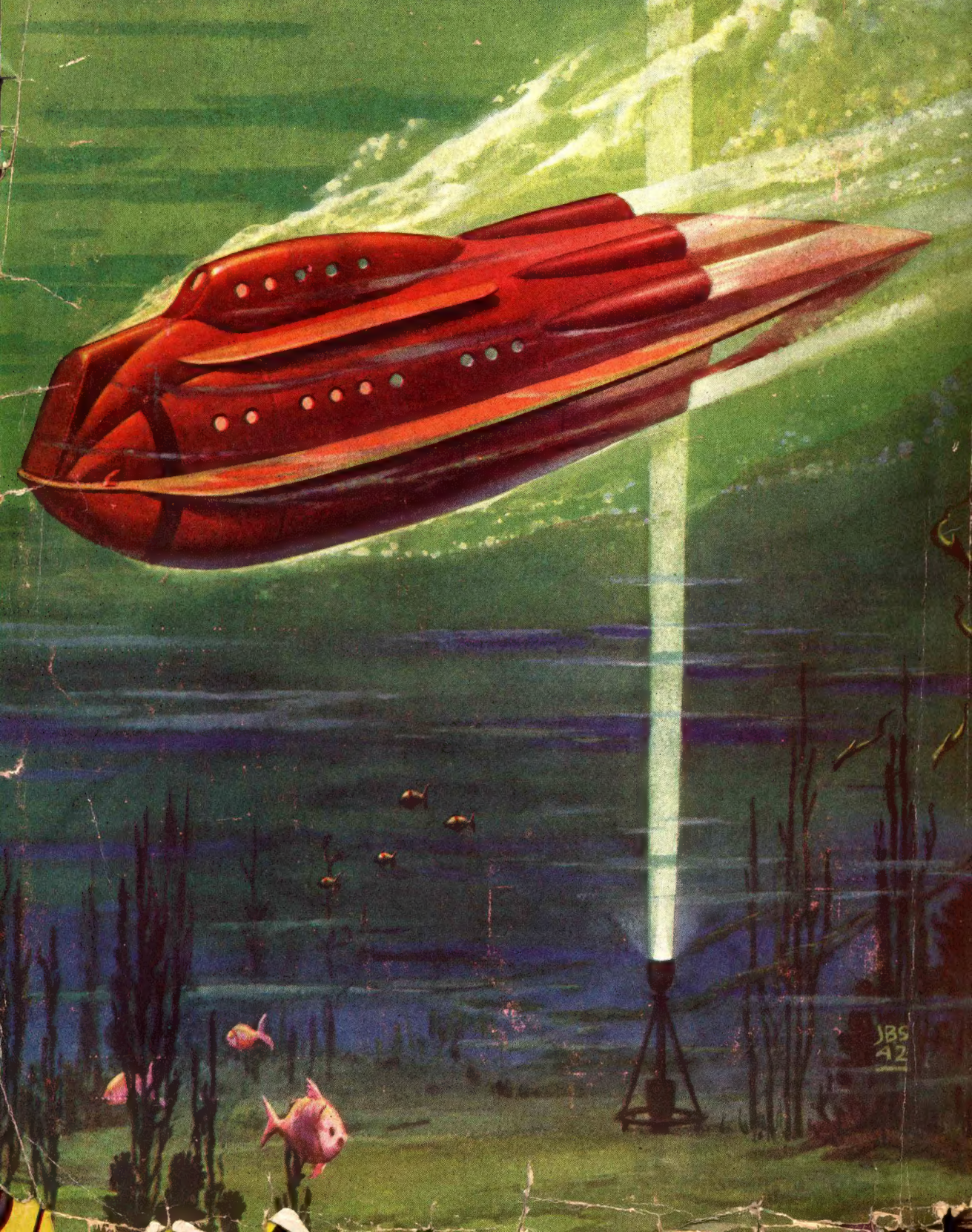
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